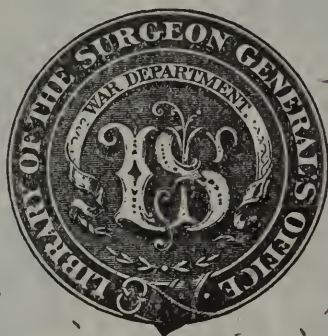


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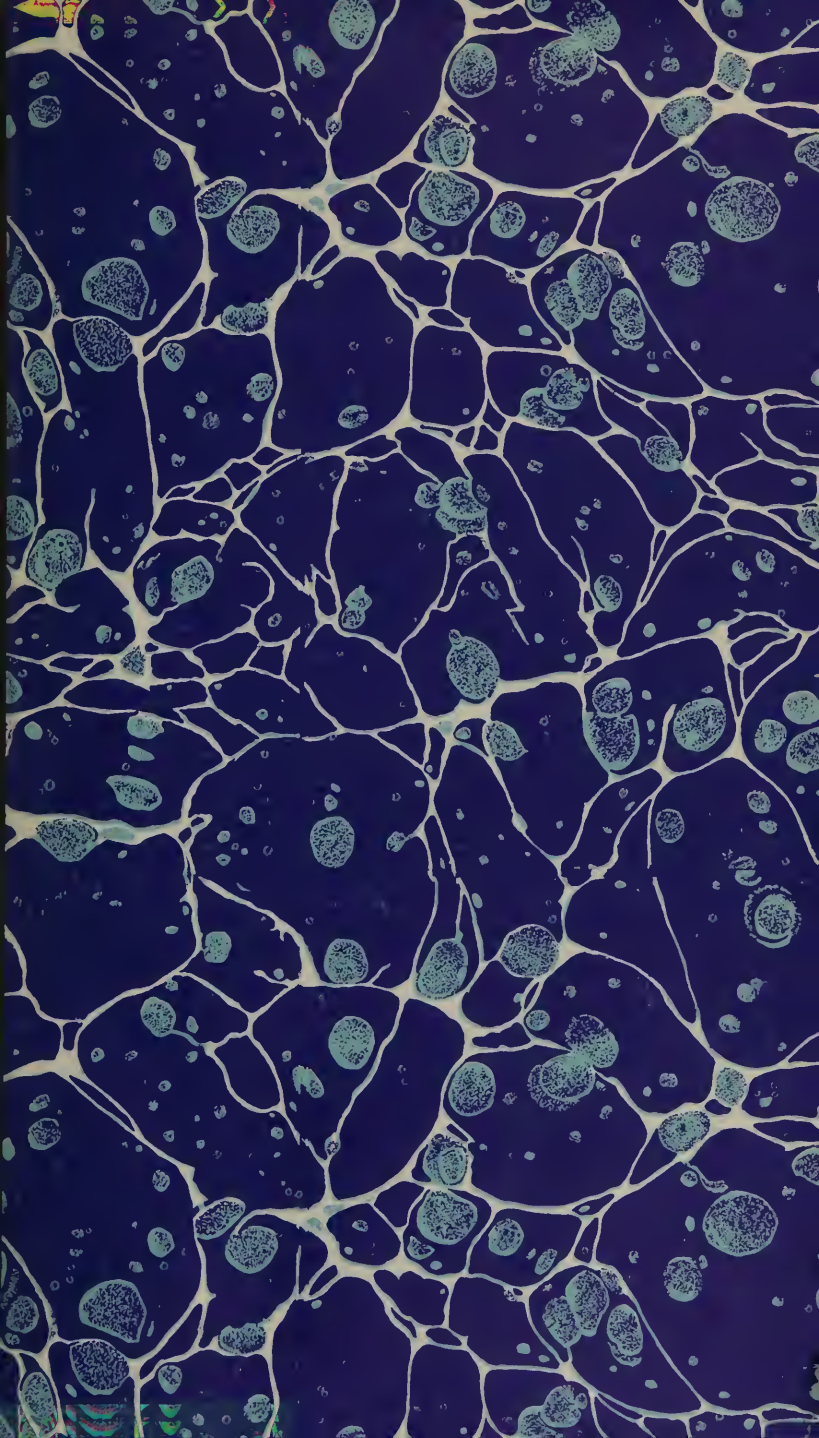
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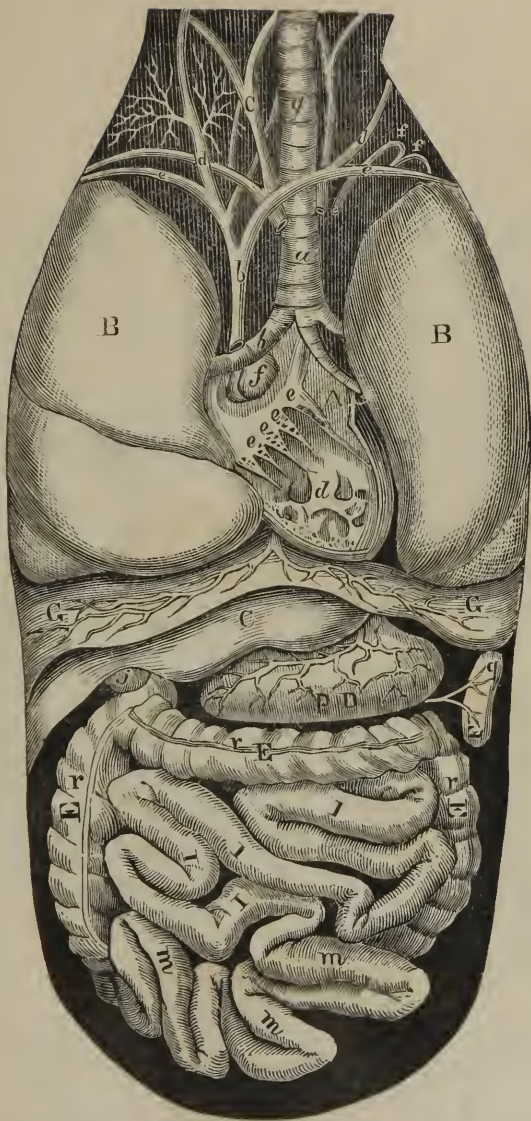
FORM 113c, W. D., S. G. O.
(Revised June 13, 1936)



BLACK COHOSH.



CIMICIFUGA RACEMOSA.



A. The Heart. B.B. The Lungs. G.G. Diaphragm. a. The Trachea. b. The Vena Cava. C. The Carotid Artery. dd. The Jugular Veins. ee. The Subclavian Veins. ff. Thoracic duct. g. Trachea or Wind Pipe. f. The Right Auricle. D. The Stomach. E.E.E. The Colon, or large Intestine. F. The Spleen. j. The Gall Bladder on the under surface of the Liver. I.I.I.I. The Jejunum, the upper part of the small intestines. m.m.m. The Ileum, or lower part of small intestines. r.r.r. Ascending Transverse, and descending Colon. p. The Arteries and Veins of the Stomach. q. Splenic Arteries and Veins. e.e.e.e. Valves of the Heart. d. Ventricle of Heart. b. Bronchia, right branch.

AN
EPITOME
OF THE
AMERICAN ECLECTIC PRACTICE
OF MEDICINE,

SURGERY, OBSTETRICS, DISEASES OF WOMEN AND CHILDREN,
MATERIA MEDICA AND PHARMACY, WITH GLOSSARY,

DESIGNED FOR
PHYSICIANS, THE STUDENT OF MEDICINE, AND AS A
DOMESTIC PRACTICE FOR FAMILIES.

BY
WILLIAM PAINE, M. D.,

PROFESSOR OF THE PRINCIPLES AND PRACTICE OF MEDICINE AND PATHOLOGY IN THE
ECLECTIC MEDICAL COLLEGE OF PENNSYLVANIA, PHILADELPHIA.

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TO ALL THOSE WHO,
IN SPITE OF POPULAR PREJUDICE AND EARLY EDUCATION,
POSSESS THE INDEPENDENCE OF MIND
AND INTEGRITY OF PURPOSE,
TO DISCARD OLD ERRORS, AND ADOPT NEW TRUTHS,

THIS WORK

Is Most Respectfully Inscribed by

THE AUTHOR.

EXPLANATION OF ABBREVIATIONS.

As this work is designed not only for the profession, but as a domestic practice for families, I here introduce and explain all the symbols and abbreviations used in the book, so that by thirty minutes' study, the non-medical reader can understand not only all the formulas and recipes used in the work, but will be able to read the prescriptions of physicians wherever he may find them. By doing so, the patient can detect the frequent impositions practised upon him by the use of these characters and abbreviations, and will also be able to expose the frequent blunders of the druggist in filling them:—j. stands for one, ij. for two, iij. for three, iv. for four, v. for five, vj. for six, vij. for seven, viij. for eight, ix. for nine, x. for ten, xj. for eleven, xij. for twelve, xx. for twenty, xxx. for thirty, &c. R., recipe, take; ꝑ., misce, mix; gr., granum, a grain; O., octarius, pint; ss., semi, half; āā., of each ingredient equal parts; lb., libra, pound; ℥., uncia, an ounce; ℥., drachma, a drachm, or dram; gutta, drop; ℥, one scruple; tinct., a tincture; ext., extractum, an extract.

The above are all the abbreviations and characters used in the book and in ordinary physicians' prescriptions, and by referring to these a few times, the reader can so familiarize himself with them, as to be able to understand them when they occur elsewhere, as readily as if the words were spelled in full.

In the formula of the book, the abbreviations have all been omitted, and each word spelled out in full, and all cases where the Latin name is given, it is also rendered in English. All the technical terms are fully explained in the glossary in the back part of the book. Every possible pains has been taken to make the work a reliable family physician, text-book for the student, and guide to the practitioner. In all cases where the non-medical person prescribes from this work, unless the remedies are very soon followed by relief, a regularly educated Eclectic physician should be consulted.

P R E F A C E .

THE present volume, it is hoped, will supply a deficiency which exists in our Eclectic medical literature. We have quite a number of medical works published on the principles and practice of American Eclectic Medicine, designed both for the profession and the people; but published as they mostly were at an early period of the Eclectic practice, and previously to many of our most important discoveries in organic chemistry and concentrated Eclectic medicines, they are far from representing the true condition, and superior advantages of our profession at the present time. Hitherto authors have designed their works either exclusively for the profession, or the people;—those published for the profession were couched in language far beyond the understanding of all save the educated physician,—whilst those designed for the people, were so simple, the medicines so common-place, and inefficient, as to render them of comparatively little value. In

the present volume I have explained all the technical terms, abbreviations, &c., so that the people as well as the profession may understand it. I have also given the most reliable information known to the profession, relative to the nature, cause, and treatment of disease, so that the non-professional as well as the professional reader will possess equal advantages in the application of what ample experience has shown to be the most successful system of treating disease ever offered to the afflicted.

THE AUTHOR.

PRACTICAL PRINCIPLES

OF THE

AMERICAN ECLECTIC SYSTEM OF MEDICINE.

The present state of society is admitted to be one of great intelligence, and as such, demands a thorough revolution in all those systems which ignorance has originated and self-interest kept alive. The supporters and advocates of such systems not only assume to be wise, but condemn every thing which is opposed to their prejudices and inherited opinions. This is now the case with the old school or allopathic system of medicine. This system is a thing of the past, a product of the dark ages, and bears upon its face the ancient date of its birth. Its great object and aim are secrecy, and when scrutinized by the light of the science and intelligence of the nineteenth century, its fallacies, deformities and imperfections make a most unseemly exhibition. Its advocates, notwithstanding, assume the prerogative of infallibility, and like the priests of old, are doing all in their power to keep the world in ignorance, not only as to the real nature of their system of medicine, but of all other systems, and in this they have too well succeeded for the good of mankind. All other cognate sciences are presented to an intelligent people in harmony with the progressive spirit of the age, elucidated and explained in a manner calculated to impress

the mind with all the facts brought to light by modern researches and discoveries. The allopathic system of medicine, on the contrary, stereotyped in notions the most fanciful, dreamy and unreasonable, in dogmas the most crude and speculative, is kept in monkish seclusion, as if far beyond the comprehension of ordinary mortals—as if none but those who have stood the test of initiation, and received the holy sanction of the fathers, could at all understand. Instead of courting investigation by teaching its doctrines in plain language, every thing has been wrapped in obscure and unmeaning phraseology. As the result, there exists at this time the most complete and universal ignorance respecting their principles and practice of medicine among all classes, except those who have learned from the reform literature and practice of the day. A strange anomaly in the history of these allopathic professors and practitioners is, that an individual after having gone through a regular prescribed course of medical studies, and that, too, under the strictest allopathist, and having been declared by a board of examiners to be thoroughly qualified to practise medicine, and having obtained a diploma as a guarantee to the public of his competency to discharge the highly responsible duties of physician to the sick, must be branded as a quack, and that, too, for no reason other than that he has added to his medical researches a knowledge of other systems of medicine, as Homœopathy, Hydropathy, Botanicism, Thomsonism, &c. Humiliating and disgraceful as this is, it is nevertheless true that these medical bigots, actuated by a spirit of intolerance, no sooner learn that one of their practitioners has adopted the eclectic system of medicine, than they raise the cry of imposture and quackery. Every physician has a right to form an opinion of his own, but before passing judgment on others, he should make himself thoroughly acquainted with their doctrines and principles. In our medical colleges we review all the doctrines and medical resources of the different systems, and wherever we find a well attested truth, a reliable item of knowledge, no matter to what department of medicine it belongs, we at once engraft it into our system of practice. Do the other systems of medicine do this? Do they understand and teach the specific medical powers and

invaluable utility of the hundred new and potent remedies introduced by the eclectic profession? Are their students as impartially taught eclecticism as allopathy or homœopathy. Their entire ignorance of our remedies and principles of cure most conclusively show that they are not. Eclectic physicians have discovered and are using remedies which enable them to cure a large per cent. of cancer, hydrophobia, epilepsy, tetanus, scrofula, consumption, necrosis, &c., all of which are regarded as incurable under other systems of practice. Besides, we cure all diseases, both acute and chronic, in a much less time and with far more certainty than any other system. No fact is better established than that the eclectic system of medicine possesses means to cure dysentery, typhoid fever, pleurisy, pneumonia, inflammation, &c., &c., almost immediately, and that too by remedies which, while they act specifically in removing disease, leave no constitutional injuries. But like every other discovery which is calculated to promote the happiness of mankind, eclecticism is destined to receive from medical bigots criticisms similar to every new discovery and essential improvement.

Harvey, who discovered the circulation of the blood, was called the circulator, in derision. He was deprived of the right to practise his profession in his own country; was threatened with banishment, and finally was compelled to leave his native land, to escape the obloquy that was heaped upon him, and died without realizing the benefit of his labours.

In 1522, Ambrose Pare first introduced the ligature, and tied the artery, instead of plunging the limb into boiling tar, as was practised by his cotemporaries. He was denounced, with the most reckless violence, for daring to suspend the life of a man upon a mere thread. In 1638 the Countess of Cinchon, wife of the ex-king of Peru, was labouring under a fever, from which she was unable to obtain relief. The Governor of Loxa, having learned from the natives the curative powers of the Cinchona, advised her to employ it. After much hesitation she resolved to try it, and was by its use restored to health. Ten years afterwards, a Jesuit of Rome endeavoured to introduce the Peru-

vian Bark into Europe; but his efforts were unsuccessful. The profession proclaimed at once that it was a Papish remedy, and proceeded from Quacks, who created all manner of disease. Protestant England called it a Papish remedy, saying that it proceeded from the father of all Papists, the Devil. It was not, until in spite of all opposition, its utility was demonstrated, that physicians availed themselves of its curative powers.

Lady Mary Wortley Montague, while in Turkey, observing the wonderful effect of inoculation for small-pox, to mitigate the severity of that much dreaded disease, determined to introduce the practice into her native country. But no sooner did she make known her purpose, than the medical faculty arose at once and predicted the most disastrous consequences. The clergy descended from the pulpit on thus seeking to take events from the hand of Providence. In order to satisfy the profession and the people of the great utility of inoculation, she resolved to experiment upon her own daughter, and government appointed four of the best medical men to observe its progress. Lady Montague states, that they not only manifested the greatest incredulity as to its success, but also such an unwillingness to have it succeed, that she was absolutely afraid to leave her daughter in their hands, lest she should suffer from their interference.

In 1790, Dr. Jenner, of Gloucester, remarked that the disease known in the western part of England as cow-pox, communicated to those who milked the cows, precluded those who became thus affected from being infected with small-pox. This strange fact suggested to him the idea of inoculating children with virus directly from the udder of the cow, which he accordingly did, and in the course of four or five days he saw pustules developed at all points where the skin had been punctured, similar to those of cow-pox; when the pustule broke, the pus dried, forming a thin scale or crust, which, falling off, left a cicatrice. There was little or no fever, the children continuing to eat and play as usual. After repeated experiments of this kind, Dr. Jenner became satisfied of its being a preventive of small-pox, as not a single child thus inoculated was attacked with it. But how was the discovery received by the illiberal and dogmatical portion of the profession? With ridicule and contempt, like every other proposed improvement. Jenner was

persecuted, oppressed, and driven from his country; even religion and the Bible were made engines of attack against him and his invention. Errhman, of Frankfort, attempted to prove from Scripture that vaccination was the anti-Christ. At that time small-pox was the scourge of the human family, and, but for the discovery of Jenner, would have remained such until the present time.

In 1315, Mondini dissected two human bodies, and shortly after published his *Epitome of Anatomy*, illustrated with woodcuts. At this time, and for a long time afterward, it was customary to demonstrate anatomy upon the hog and other animals. The act of Mondini was considered heresy. The persecution of Mondini, together with the prejudice existing upon the subject at the time, prevented any other dissection of a human subject for more than a century; and Mondini, in his experiments, dared not open the dead for fear of committing a mortal sin. It was not until the commencement of the sixteenth century that dissections for anatomical purposes were made, and then they were performed by the authority of the Pope, and not at the instigation of the medical profession.

The natives of Brazil first taught the medicinal qualities of ipecac.; but, owing to the opposition with which it was met by the medical profession, it was more than a quarter of a century before its virtues were appreciated. A Mexican soldier, more than half a century ago, demonstrated the styptic properties of the Matico, and its entire control over the bleeding vessels of the body; but such is the tendency to oppose every new remedy that, as yet, it is never employed by the mass of the profession. Dr. Samuel Thomson discovered and proved the valuable medical properties of Lobelia; but on modestly making known his discovery to the profession, it was not only denounced, but he was persecuted and imprisoned. At this time we find medical men using it in disguise, and at the same time denouncing its discoverer. In 1823, an association of scientific medical men, from different parts of the country, met in New York city, and made preparation for organizing a reform medical college; when, by the indomitable energy of Dr. Beach, the first reform medical college in the world was organized.

The object of this organization was to break the shackles of

Hunkerism; to open the science of medicine to all bold and thorough investigators; to enlarge and improve the *materia medica*; to investigate more fully and clearly the nature and character of disease peculiar to the country and climate, and to place the entire profession upon a more liberal and scientific basis. But no sooner was the object and aim of this institution announced, than a majority of the profession commenced an attack upon it, denouncing, violently, all who were identified with this philanthropic movement. Dr. Beach, its founder, although a man of learning, and a graduate of one of the first allopathic colleges in the country, was assailed with terms of insolence and reproach, and all those who had the courage to participate in the work shared the same fate. To all who are in any considerable degree acquainted with the history of medicine, it is obvious that this conservatism, which has long been a characteristic of the profession, has had a most disastrous influence upon its progress.

The conservative, always ready to apologize and explain the reasons for his ungenerous course, with all complacency affirms that to talk of improvement is but a dream; that the fathers of the profession have left us their knowledge as a choice legacy, which we should keep in grateful remembrance; that the profession has already attained a position which entitles it to the highest respect.

Yet the positive uncertainty of medicines is manifested in a striking degree, as we trace the history of particular remedies, recommended by those who are revered as almost divine authority by the conservative. What differences of opinion—what an array of alleged facts directly at variance with each other—what opposite results of like experience—what ups and downs, glorifications and degradation, confidence and despair—arose in treating the same disease with the same remedies. To be satisfied upon this point we need only refer to the history of one or two prominent diseases, viz: pneumonia and syphilis. Mercury, antimony and blood-letting have been regarded as specifics in these diseases by many authors, while others of equal pedantry and learning have rejected them as useless and injurious. Such has been the uncertainty of practical medicine, that even the conservative portion of the profession, if they become

in the least enlightened, omit the heroic and adopt the expectant or tentative mode of practice. The foregoing facts disclose a lamentable state of things, but not a state to be despaired of; much less is it one to be concealed. It is our duty as guardians of the lives and health of our fellow-beings, to unmask, not only the virtues, but the faults of the profession. The course of our subject will now lead us to attempt to disclose in what the defects of the allopathic system of practice mainly consist; the cause of these, and the means which seem best calculated to remove them. Also the principles which govern the Young American Physic. In order to fully understand why the allopathic system of practice is not more successful in removing disease, it will be necessary to enter more fully into its principles of cure and therapeutic resources. For the investigation of these, it will be necessary to enter somewhat into the history of medicine. Pliny states that, if there exist any nation in which at any epoch of its history physicians were not found, there is none in which traces of medicine were not visible. It is probable that medicine has existed, either as an art or science, from the earliest period; and that the practice of medicine had its existence in the natural tendency of the soul to resist death, together with benevolent impulses towards the sufferings of others.

The earliest and most authentic account we have of the practice of medicine, is that given of Centaur Chiron, a prince of Thessaly, who went out in the expedition against Troy. From all accounts we have of his practice, it was exceedingly empirical, and consisted in the external application of a few remedies to wounds, &c., together with incantations and ceremonies to affect the imagination. Chiron transmitted his profession, according to custom, to his son Æsculapius, and Æsculapius to his two sons, Machaon and Podalirius.

Fifty years after the destruction of Troy, a temple was erected at Titanus, a city of the Peloponnesus, in honor of Æsculapius, who was worshipped as a god. The worship of this god very soon spread throughout Greece and passed into Asia, Africa, and Italy. Multitudes of temples were consecrated to him, among which those at Epidaurus in the Peloponnesus, at Pergamos in Asia, on the island of Cos, and at Cyrene, a city

of Libya, were particularly famous. In the temple at Epidaureus there was a statue of colossal size representing the god of medicine, under the figure of an old man, seated on a throne, holding in one hand a sceptre, and resting the other on the head of a large serpent; a dog, the emblem of vigilance, rested at his feet. The statue was of gold and ivory, and was the workmanship of Grasymedus. Socrates, it is said, in his last discourse with his friends, requested them to offer for him a cock, as a sacrifice to Æsculapius; whence we infer that this bird was sacred to the god of medicine.

The priests attached to this worship were named Asclepiades, or descendants of Æsculapius. They regarded all the knowledge, relative to disease and medicine, as sacred, their laws forbidding it to be revealed to the non-elect, lest their god should be angry; strangers were not admitted to this knowledge until they had been subjected to certain ceremonies called the tests of initiation.

These temples were erected in the midst of the most delightful scenery; no pains were spared to furnish them with the most agreeable and healthful diversions; they breathed a pure air, were subjected to a wholesome regimen, and every possible means was used to affect the mind and imagination agreeably; thus exercising a healthful and happy influence upon the constitution. Fasting and prayer were strictly enjoined upon the patients, also abstinence and sacrifices, before they were admitted to receive the response of the oracle. Those who were benefited went to their homes blessing the author of their recovery, and those who were not benefited redoubled their efforts to propitiate the god in their favor. Besides these means, remedies were used, not unlike those now in vogue, consisting in bleeding, purgatives, vomiting, friction, mineral water, &c.

There existed in the country, about Epidaureus, serpents of a yellowish brown color, whose bite was not poisonous, and which were easily tamed.

These were employed by these priest-doctors to more effectually impress the minds of their patients with wonder and astonishment at their supposed power, which, from all accounts, had the desired effect. Aurelius Victor relates, that during the year 350 of the foundation of Rome, that city was scourged by a terrible

pestilence ; the Senate sent six deputies to consult the oracle at Epidaurus.

On arriving at the temple, suddenly an enormous serpent issued from beneath the pedestal. The sight of it filled every mind with veneration more than with terror. He moved tranquilly through the crowd and entered the vase of the Romans in the chamber of Ogulnius, the chief of the ambassadors. The serpent was sacredly borne away, and when the ambassador was approaching the city of Romulus it sprang into the waves and swam to an island in the Tiber, where a temple was immediately erected to *Æsculapius*, and the pestilence ceased.

It can hardly be doubted that the priest-doctors of these temples were endowed with strong natural powers of mind ; that they understood the influence of mind over matter ; and that a strong belief in their ability to cure, contributed in a very considerable degree to their success. The teachings in these temples were confined to the family of *Æsculapius* for some eight or nine hundred years. After a time they became more general, assuming more of the character of the medical colleges of the present day. Their means of teaching was confined mostly to tablets hung upon the walls and columns of the temples, showing the name of the patient, the disease, and the manner in which it was treated. One of these tablets, found on the island in the Tiber, the site of the ancient *Æsculapian* temple, bears the following inscription in Greek characters :—
Lately a certain Caius, who was blind, came to consult the oracle. The god required that he approach the sacred altar to perform certain adorations ; at once he passed from the right to the left, and having rested his fingers on the altar, he raised his hands and applied them to his eyes, whereupon he recovered his sight immediately in the sight of all the people, who rejoiced to see such marvels performed in the reign of our august Antoninus. Upon the same tablet is the account of one Julin, who had pleurisy, and the gods ordered that the ashes of the altar be put into wine and applied to his side, which being done, he was immediately cured. Another man, Valerius Aper, was blind, and the gods ordered an ointment of the blood of a white cock and honey to be applied to his eyes, which was done, and his sight restored. The only principle which guides these

priest-doctors in the administration of medicine for the cure of disease, was, that remedies, which have once cured, will cure again under similar circumstances.

The practice of medicine, in the temples, was continued until about the commencement of the Christian era. Pythagoras, who was born in the year 500, B. C., at Samos, one of the most flourishing islands in the *Ægean* sea, having one day heard a lecture on the immortality of the soul by Pherecydes, was so charmed that he renounced every other occupation to devote himself to philosophy. He travelled among the most enlightened nations, obtaining extensive knowledge in every art and science cultivated at that early period, and that of medicine among others. It was Pythagoras who first introduced the practice of visiting patients in their own houses; he also rejected all theories in medicine, and contended that experience was the only safe guide to a successful medical practice. Hippocrates, who was born on the isle of Cos, 460 B. C., was one of the first reformers in medicine we have any account of. He was one of the direct descendants of *Æsculapius*, and received his education at Cos, which contained a temple dedicated to *Æsculapius*, and a medical school; thus his advantages for acquiring a medical education were very favorable. He was not satisfied, however, with this instruction, and extended his researches into the principal Greek cities of Europe and Asia, taking a survey of the art of medicine as it then existed, which was in a state sadly deficient and imperfect; the ideas of disease, and principles of cure, being of an exceedingly vague and uncertain character. He consequently commenced a series of experimental investigations into nearly every department of medicine.

He opened an earnest warfare upon the superstitious ceremonies of the *Æsculapian* priests, and advocated the custom, introduced by Pythagoras, of visiting patients at their own houses. He also classified and arranged diseases and remedies in a much more systematic manner than had hitherto existed, and introduced a variety of new remedies, which proved exceedingly valuable in the treatment of disease. His system of Therapeutics was, however, similar to his predecessor; depending in his choice of remedies upon those which experimental observ-

ation had proved beneficial in removing disease. To show the reader how slightly the treatment of disease, twenty-two centuries ago, differed from that of a class of practitioners at the present time, I will here introduce the treatment for pleurisy, given by Hippocrates, as translated by Renouard.

“It is necessary to examine, in the following manner, the peripneumonic and pleuritic affections; if the fever is acute; if there is pain in one or both sides of the chest; if the patient suffers during expiration; if he coughs, and the expectoration is rusty or livid, or thin and frothy, or of a blood-red — if, in fine, it differs at all from that which is natural, the following course must be pursued: the pain extending above and towards the clavicle, or towards the vein and the arm, the internal vein of the arm on that side should be opened. The quantity of blood drawn should be proportional to the constitution of the body, the season of the year, the age and color of the patient; and if the pain is acute, the bleeding should be boldly pushed to syncope; afterward an injection is to be administered.

“If the pain occupies the inferior region of the chest, and is very great, you should prescribe for pleuritics a mild purgation; but the patient must taste nothing else whilst the medicine is operating. After the purgation they should have an oxymel.* The purgation should not be administered until the fourth day; during the first three days injections should be employed; but if they are not sufficient, the purge should be given, as above said. He must be watched until the fever ceases, and the seventh day is attained; after that, if he appears out of danger, he may take a little barley-water, sweetened with honey. If the convalescence progresses and the respiration is good, the tisane † may be given twice a day, and be gradually increased in quantity and strength; but if the convalescence is slow the drink must be lessened, and a small quantity of weak tisane, for nourishment, once a day. It should be given when the patient is in the best condition, as may be known by the appearance of the urine. ’

“To those who approach the close of the disease, it is not necessary to give the tisane before you see the coction manifested in the urine or expectoration; nevertheless, if, when purged, the

* Decoction of barley.

† Oxymel, honey and vinegar syrup.

patient has abundant evacuations, it is necessary to give the tisane, but in less quantities and weaker, otherwise the emptiness of the vessels would allow him neither to sleep, nor to digest, nor to await the crisis. With this exception, the crude humors should be liquefied, and whatever has been the obstacle should be ejected: then nothing prevents alimentation. The expectoration is perfectly concocted when it appears like pus: the urine, also, when it has a red sediment like brick-dust.

“As to the pain in the side, nothing contra-indicates the use of fomentations and wax-plasters. The legs and arms should be rubbed with warm oil and then anointed with fat. The hypochondria should be covered as high as the breast with a flax-seed poultice. When the peripneumonia has reached its height, nothing can be accomplished without purgation: it is bad if the patient has dyspnœa, or if the urine be thin and acid, or there be sweats around the neck and head. These sweats indicate danger in proportion to the violence of the disease, which is known by the suffocation and rattling, which increases and produces death, unless there supervene an abundant flow of viscid urine, or of concocted sputa. Whichever of these two phenomena supervenes, it indicates resolution.

“An eclegma is prescribed for peripneumonia, with galbanum and grains of pine seed, in Attic-honey. Other expectorants are employed, such as worm-wood (*Artemisia abrotanum*, Lin.), and pepper in oxymel; purgatives—boil black hellebore (*Helleborus orientalis*, Lin.), and give it as a drink to pleuritics at the commencement and while the pain is felt. A useful remedy in affections of the liver, and in pains proceeding from the diaphragm, is a drink of opoponax (*Pastinacæ opoponax*, Lin.), boiled in oxymel and strained. In general, a remedy that is to act on the stools, or urine, should be given in wine and in honey if to act on the stools alone, it should be given in a much large quantity of diluted oxymel.”

It will be seen, by comparing the treatment of Hippocrates with that of Dr. Eberle, given in another part of this work, that there is no essential difference. The bleeding and purgative plan is still adhered to.

At the death of Hippocrates, which occurred when he was about one hundred years of age, his two sons, Thassalius and

Draco, together with his son-in-law Polybius, cultivated the art of medicine, and transmitted the knowledge of their father by teaching in a public manner his doctrines. Hippocrates and his sons were the first authors of any note upon the subject of medicine.

The foundation of the Alexandrian Library, about the year 320 B. C., had a happy effect upon some departments of medicine, as Anatomy, Physiology, &c.

But from the statement of Galen, who had examined all the contents of this library relative to medicine, it appears that the only knowledge it evinced of therapeutics was merely experimental. The Alexandrian Library is said to have contained about 600,000 volumes or rolls, which were equal to about 200,000 modern bound volumes. This library contained all the valuable information of those times in every department of science and art. It was burnt by Caliph Omar, A. D., 640, who gave as his reasons that, if the books agreed with the Koran, they were of no use, and if they disagreed they contained heresy, and should be burnt. Thus far in the history of medicine, the only therapeutic axiom was this: When a treatment was successful in one case, it was always employed in analogous cases without inquiry whether it acted upon one principle or another; although Hippocrates and his disciples suggested some diseases were cured by their opposites, and others by similars; while again diseases have been cured by remedies which appear to be neither similar nor contrary to the nature of the disease.

It is not my purpose to enter in any considerable degree into the consideration of the theories which prevailed in those ancient times relative to disease, yet I can hardly present to the reader any thing like an idea of the comparative condition of medicine, without noticing in a brief manner some of the more prominent notions relating to it. The Asclepiades, of the isle of Cos, regarded disease as a series of phenomena, resulting from the efforts of nature to remove the cause of the disease. They regarded nature as competent to accomplish her purpose in many instances, but in others medical interference become necessary. They also regarded disease as having critical days and a certain duration. Pythagoras states that the number of days which bring about the cure or death of a patient, regulates the crisis of fevers. In

remarking upon the observation of these critical periods and daily phenomena of disease, he says that a physician who neglects nothing that may contribute to the patient's health, must observe carefully what passes each day.

Among those days of even numbers the most important are the fourteenth, the twenty-eighth, and the forty-second. Whoever carefully observes the phenomena of disease, as described by these ancient authorities, will see an aphorism of Prof. J. J. Jones verified: That all diseases are more or less periodic. Following the doctrine of crisis is that of the four elements, Heat, Cold, Dryness and Moisture; and the four cardinal humors, blood, bile, atra-bile, and phlegm.

Empedocles was the first to introduce this doctrine of the elements. He says the human body is composed of blood, phlegm, and two sorts of bile—yellow and black; and that their condition determines the state of health; that perfect health consists in a due proportion of each; that disease is caused by an excess of any one of these, or if any one lacks its due proportion, or is evacuated without being properly mixed—for when it is thus evacuated, they claim that not only the region where the admixture took place must be affected, but the organ, through which it passed off, must suffer and become diseased. Another theory of those times was, that all disease was caused by cold, which they explained as follows:—Colds cause the condensation of the tissues and veins of the head; if the cold strikes them when they are heated, they contract, and the humors contained in them are expelled. All the tissues are obliged to pour out their fluids when they contract.

Fluxions are also caused by the tissues becoming heated, which rarefies them, enlarges their pores; the humors they contain are attenuated, so that it flows easily when compressed. This theory of fluxions is regarded as being anterior to Hippocrates. For a long time after Hippocrates, we have no writings from which we can learn any progress in the practical resources of the profession. From all we can gather, it would seem that little, if any, progress was made in the principles or practice of medicine for many centuries. Herophilus is mentioned by some as a reformer in medicine, and as having introduced quite a large number of medicines; but what they were, history fails

to tell us. Dioscorides states that the medicines used by him had the power to dissolve stone in the bladder; to consume the spleen; to prevent conception in females; of making children black-eyed, &c.; also, that they would prevent the various manifestations of mental emotions and passions. The *modus operandi* of medicines, as explained by the ancients, was that they acted upon the system according to the degree of heat or cold, dryness or moisture, of the system. A principle not very dissimilar to that advocated by the modern Samuel Thomson, which was that heat was life, and cold was death; and that medicines acted beneficially or otherwise, according to the degree of heat they contained.

Ætius, who lived at the commencement of the sixth century, and was the first physician of eminence who embraced the Christian religion, dispensed with most of the ceremonies, magic and incantations, that originated in the Æsculapian school; but instituted others almost equally superstitious. In his directions to use certain medicines, he recommended that the following words be repeated in a low voice: May the God of Abraham, the God of Isaac, the God of Jacob, deign to bestow upon this medicine the necessary virtues, &c. In extracting a foreign substance from any part of the system, he recommends, in connection with proper means used, the following words: As Jesus Christ caused Lazarus to come forth from the sepulchre, as Jonah came out of the whale's belly, come thou out. In his practice he made free use of the cautery, and introduced a number of new ointments. He also claimed to have introduced to the *materia medica* several new remedies, but did not tell us what they were. His principles of practice were the same as his predecessors.

Rhazes, an Arabian physician, although a strict imitator of the Greek practice, offered one or two suggestions worthy of remembrance. Among other considerations, he says: "study carefully the antecedents of the man to whose care you propose to confide all you hold most dear in the world—that is to say, your life and health, and the life and health of your wife and children. If the man is dissipating his time in frivolous pleasures; if he cultivates with too much zeal the arts that are foreign to the profession, such as music and poetry; still more if he

is addicted to debauchery, refrain from committing into his hands a trust so precious."

Hally-Abas, Avicenna, and Albucasis, were also Arabian physicians of some note, and lived in the eleventh and twelfth centuries. They added to the resources of the Greeks several articles of some value, such as cassia, senna, and manna. They also added several ointments and syrups to the pharmacy. In the principles of treating diseases, however, they made but little, if any, advancement.

On examining the progress in the principles and practice of medicine, from its commencement to the close of the seventeenth century, we find that the principal improvements were made by the descendants of Æsculapius, Hippocrates and Galen; that the Arabians, Turks, and Jews, did little, if any thing, more than teach it as it had been taught by Hippocrates. Even after the discovery of the art of printing by Guttenberg and others, in 1424, physicians appeared to be entirely satisfied in translating the writings of ancient authors, and in commenting upon what, it would appear, they thought a fixed science.

In the year 1700, John Fernel, who wrote quite extensively upon the materia medica, re-examined the therapeutic axiom of Hippocrates, that all diseases are cured by contraries. He stated that every disease must be cured by contraries; for, says he, "a remedy is that which can drive out a disease, and that which drives acts violently. That which uses violence is in opposition, therefore the remedy is always opposed to the disease, and no healing can take place except in virtue of the law of contraries. We call contraries not only those things which are endowed with opposite elementary qualities, heat and cold, dry and wet, but also things which differ among themselves in any way, as to quantity, number, quality, &c. Thus the hard and the soft, the dense and the diffuse, the great and the small, that which is in excess and that which is deficient; the high and the low, the pure and the impure, are all examples of contraries. These are the views of Fernel relative to the therapeutic action of medicine, although he carried them further than Hippocrates and Galen, and entirely rejected their experimental knowledge of therapeutics, and claims the law of contraries to be impossible.

Paracelsus, a native of Einsiedeln, a village of Switzerland, lived in the latter part of the sixteenth century, and although a man of neither integrity of purpose, nor stability of character, obtained almost universal sway over the medical profession. He claimed to have made great discoveries in therapeutics and pathology. He stated that the human body, like the great world of which it is an image, is composed of four elements, fire, air, earth and water. The fire in man is the soul; the earth is represented by the dry parts; the water by the liquids; the air by the vacuum. These four elements cause disease. But if we leave this high analysis to get at the more immediate elements, the body of man is composed of mercury, the liquor of sulphur and salt. And now we see how this is demonstrated by alchymy. There are, in the first place, in the body liquids; these are the mercury; then the solids, which may be burnt; the portion which burns is sulphur, while the residue or the ashes is salt. It can hardly be imagined how a man can embody, in so few words, such an amount of ignorance, and, what is still more wonderful, is, that a system, thus founded in the grossest ignorance, should exert such an influence on the medical profession. The additional element of mercury, which he added to the four elements of the ancients, enabled him to found a new system of therapeutics, and in a measure to introduce new principles of cure. Mercury, he tells us, being in close relation to ordinary quicksilver, produces, by its volatility, many affections of the ligaments, as tremblings, &c. If it becomes excessive, or if it be joined to acrimony, mania, phrenzy and madness occur. On the contrary, if the mercury is chilled, it causes trembling of the hands and feet, lethargy, erosions of the mouth, &c. Sulphur causes various kinds of fevers, jaundice, &c. Salt causes gravel, gout, sciatica, and, when it becomes dissolved, it causes diarrhœa; if it coagulates, constipation; if it volatilizes too soon, it causes ulcers, itch, erysipelas, cancers, herpes, &c. For the purpose of removing all these diseases, he introduced into the system antimony, gold, mercury, copper, and some other metals. He discarded many of the remedies of Hippocrates as being ineffectual and unable to control the elements of the body, and pretended the principle upon which mercury removed disease from the body was a profound secret, peculiar to himself. It

was a combination of these metals which composed what he called his *elixir vite*, or universal remedy for all diseases. One attempt which he made to explain the *modus operandi* of his medicines, will suffice to show his entire ignorance upon the subject. It was as follows:—"As antimony purges gold only, and consumes all other metals, it is the proper agent to purge the human body, and no other; for in regard to perfection and forces, man has a great similitude to gold; whence it follows, that antimony brings man and gold to a supreme degree of perfection and purity, while it destroys, consumes and exempts every thing else. The nature of antimony is a purgative, though it does not produce evacuation of fæces and other excrements; but, above all other remedies, which act insensibly, it drives out that which renders man impure, and having purged the cause of disease, brings him to a supreme degree of health." It will readily be perceived from the above quotation, that in the administration of medicine, he was guided for less by correct principles than his predecessors in the profession. Paracelsus was the first physician who used mercury and the other violent mineral poisons. Andrew Libanius, a physician, chemist and director of the gymnasium at Cobourg, and cotemporary of Paracelsus, informs us that the latter cured very few of his patients; that he killed a great many, and that many others were horribly tortured by the use of his medicaments. As ignorant and unskillful as was Paracelsus, he is the founder of the present system of Allopathy; and the very remedies of which he composed his quack *elixir*, are still insisted upon as being the almost universal panacea for bodily ills. It is true that men, eminent in the profession, have labored for a more rational system of practice; have minutely investigated the cause and nature of disease, and have very materially improved the condition of pathology. But notwithstanding all this, it must be acknowledged that their therapeutic resources are essentially the same as those of Hippocrates and Paracelsus. By referring to the compendium of Dr. Eberle's Practice, in another part of this work, we can learn what the resources of the Allopathic portion of the profession are. To be sure, every article is not there enumerated which has been recommended by that branch of the profession; but, he being a late author, and having enjoyed the confidence of the profes-

sion as such for nearly a quarter of a century, it is probable he as fairly represents his party in medicine as any author I could select. According to all their authors, bleeding, blistering, mercury, antimony, &c., are their principal therapeutic resources. With these are they successful in accomplishing the only purpose for which medicine is cultivated?—that of healing disease. The first of these resources, in order, is bleeding. Is bleeding of service in the treatment of disease? Is it productive of more good than evil? These are questions which should be solved before venturing upon so active a measure in changing the normal condition of the human organism.

To assist us in the solution of this question, we may first inquire, what are the purposes of the blood? what part does it perform in the economy of human life. Scripture tells us that the blood is the life of the flesh. Physiology tells us that the blood is the histogenic material, out of which all the organs of the body are formed, and by which they maintain their normal integrity. Pathology, still further, informs us that a large majority of all disease that afflicts the human family is dependent upon, or is caused by, a deficiency in the whole, or in certain constituents of the blood. Physiological pathology informs us that the blood is a medium through which all the disintegrated or waste portions of the old tissue are removed from the body; that it watches diligently over every tissue, and carefully supplies every deficiency. Still the question is, does it remove disease? What are the facts? The following remarks of Dr. Samuel Dickson, formerly an officer of the British staff, now of London, will show some facts upon the utility of blood-letting in the treatment of disease. “A medical officer of one of her majesty’s regiments, serving in India, couched a woman for cataract. The next day the eye having become inflamed, according to received practice, he bled the patient; but scarcely had he bound up her arm, when she fell as if she had been shot, and lay, to all appearance, dead; with the greatest difficulty he succeeded in recovering her from this state; but it was not till four long hours had passed that he felt he could safely leave her with attendants; for during the greater part of that time, when he ceased to chafe her temples, or otherwise call up the attention of the brain, by the application of stimulants to the nose, mouth,

&c., she relapsed into a death-like swoon. More than once he was obliged to inflate her lungs to keep her from dying. But in this case, gentlemen, blood-letting did not cure the inflammation; for the next day the eye was more painful and inflamed than ever, and the poor woman, after all the blood she had lost, — and who will say that she was not bled? — did not recover her sight. It is now many years since that case came under my sight, and it made an impression on my mind I shall never forget. Had the woman died, would not every one have said that the gentleman who bled her had killed her? and very justly, too.”

“Religion, Freedom, Vengeance, what you will,
A word’s enough to raise mankind, to *kill* —
Some *party*-phrase by *cunning* caught, and spread,
That GUILT may reign, and WOLVES, and worms be fed.”

“The first resource of the surgeon is the lancet — the first thing he thinks of when called to an accident, is, how he can most quickly open the flood-gates of the heart, to pour out the stream of an *already enfeebled* existence. Does a man fall from his horse, or a height, is he not instantly bled? has he been stunned by a blow, is not the lancet in requisition? Nay, has an individual fainted from over-exertion or exhaustion, is it not a case of *fits* — and what so proper as venesection? You cannot have forgotten the fate of Malibran — the inimitable Malibran; she who so often, by her varied and admirable performances, moved you to tears and smiles, by turns. She was playing her part upon the stage; she entered into it with the whole of her soul, riveting the audience to the spot by the very intensity of her acting. Just as she had taxed the powers of her too delicate frame to the utmost, she fainted and fell; fell from very weakness. Instantly a medical man leapt upon the stage, — to administer a cordial? No, to bleed her! to bleed a weak, worn, and exhausted woman! and the result? She never rallied from that unfortunate hour. But, gentlemen, Malibran was not the only intellectual person of the thousands and tens of thousands who have prematurely perished by the lancet. Byron and Scott, those master-spirits of their age — those great men, who, like Ariosto and Shakspeare, not only excited the admiration of cotemporary millions, but whose genius must continue, for gen-

erations yet unborn, to delight the land that produced them — they, too, fell victims to the lancet — they, too, were destroyed by the hands, which, however friendly and well-intentioned, most undoubtedly dealt them their death-blow. Is not this a subject for deep reflection? To the cases of these great men we shall recur in the course of this lecture; but, for the present, we must turn to other matters — to events that have just passed before our eyes. The affair of Newport, in Wales, is still the topic of the hour. You must therefore remember it to its minutest detail — the attack of the rioters upon the town; the gallant and successful stand made by Capt. Gray and his little detachment of the 35th regiment — the prisoners captured and the investigation which took place afterwards. In the course of that examination a prisoner, who was under examination, *fainted*. What was done with him? he was carried out of court and immediately *bled*. On his return an extraordinary change had come over his countenance; from being a man of robust appearance, he had become so wan and haggard, so altered in every lineament, the spectators could scarcely recognize him as the same prisoner. Yet, strange to say, not one of the many journals that reported this case, spoke a word in condemnation of the uncalled-for measure which brought the man to such a state; so much has *custom* blunted the sense of the public to this, the most dangerous of all medical appliances.

Gentlemen, a coroner's inquest was held on a person who died suddenly. Mr. —, surgeon, stated that he was called upon to attend deceased, and found him *at the point of death*. He attempted to bleed him, but ineffectually, and in less than a minute from witness' arrival, deceased expired. Witness not being able to give any opinion as to the cause of death from the symptoms that then exhibited themselves, he afterwards, with the assistance of Dr. Ridge, 37 Cavendish Square, made a post-mortem examination, and found that a large tumour, attached to a large vessel of the heart, containing blood, had bursted, and that was the cause of his death. So that, while the man was actually dying of inanition from internal bleeding, the surgeon, utterly ignorant, according to his own confession, of the nature of the disease, proceeded to open a vein. How happens it that the lancet should be so invariably the first resort of *IGNORANCE*.

“In every case of *stun* or *faint*, the employment of this instrument must be a superadded injury; in all, there is a positive enfeeblement of the whole frame, evidenced by the cold surface and weak but imperceptible pulse; there is an exhaustion, which loss of blood, so far from relieving, too often converts into a state of utter prostration. True, men recover when treated in this manner—but these are not *cures*, they are *escapes*. How few the diseases which loss of blood may not of itself produce! if it cannot cause the eruptions of small-pox, nor the glandular swellings of plague, it has given rise to disorders more immediately fatal than either. What think you of cholera asphyxia—Asiatic cholera? Gentlemen, the symptoms of that disease are the symptoms of a person bleeding slowly away from life. The vomiting, the cramps, the sighing, the long gasp for breath, the leaden and livid countenance which the painter gives to the dying in his battle-pieces; these are equally the symptoms of cholera and loss of blood. Among the numerous diseases which it can produce, Darwin says, ‘a paroxysm of *gout* is liable to recur on bleeding.’ John Hunter mentions ‘lock-jaw and dropsy’ among its injurious effects—Travers, ‘blindness and palsy’—Marshall Hall, ‘mania’—Blundell, ‘dysentery’—Broussais, ‘fever and convulsions.’ ‘When an animal loses a considerable quantity of blood,’ says John Hunter, ‘the heart increases in its frequency of strokes, as also in its *violence*.’ Yet these are the indications for which professors tell you to bleed. You must bleed in every inflammation, they tell you. Yet is not inflammation the daily effect of the loss of blood? Magendie mentions pneumonia as having been produced by it, completely confirming the evidence of Dr. Hume upon that point. He further tells us, that he has witnessed among its effects the entire trains of what people are pleased to call *inflammatory* phenomena; and mark, he says, the extraordinary fact, that this inflammation will have been produced by the very agent that is daily used to combat it! What a long dream of false security have mankind been dreaming! they have laid themselves down on the laps of their Mentors,—they have slept a long sleep; while these, like the fabled vampire of the poets, taking advantage of a dark night of barbarism and ignorance, have thought it no sin to rob them of their life’s blood during

the profoundness of their slumber! Gentlemen, the long shiver of the severest ague, the burning fever, the severest lock-jaws, the vomiting, cramps, and asphyxia of cholera, the spasm of asthma and epilepsy, the pains of rheumatism, the palpitating and tumultuous heart, the most settled melancholy and madness, dysentery, consumption, every species of palsy, the faint that becomes death, these — all these — have I traced to the loss of blood!

“ Lord Byron called medicine the DESTRUCTIVE art of healing. How truly it proved to be so in his own case, you shall see when I give you the details of his last illness: — ‘Of all his prejudices,’ says Mr. Moore, ‘he declared the strongest was that against bleeding. His mother had obtained from him a promise never to consent to be bled; and, whatever arguments might be produced, his aversion, he said, was stronger than reason. Besides, is it not, he asked, asserted by Dr. Reid, that less slaughter is effected by the lance than by the lancet — that minute instrument of mighty mischief!’ On Mr. Millingen observing that this remark related to the treatment of the nervous, but not of inflammatory complaints, he rejoined, in an angry tone, ‘Who is nervous if I am not? and do not those other words of his (Dr. Reid’s) apply to my case, where he says that drawing blood from a nervous patient, is like loosening the cords of a musical instrument — whose tones already fail for want of sufficient tension! Even before this illness, you yourself knew how weak and irritable I had become; and bleeding, by increasing this state, will inevitably kill me. Do with me what else you like, but bleed me you shall *not*. I have had several inflammatory fevers in my life, and at an age when robust and plethoric; *yet I got through them without bleeding*. This time, also, will I take my chance.’ After much reasoning and repeated entreaties, Mr. Millingen succeeded in obtaining from him a promise, that should he feel his fever increase at night, he would allow Dr. Bruno to bleed him. On revisiting the patient early next morning, Mr. Millingen learned from him that, having passed on the whole, as he thought, a better night, he had not thought it necessary to ask Dr. Bruno to bleed him. What followed I shall, in justice to Mr. Millingen, give in his own words: ‘I thought it my duty now to put aside all consideration of his feelings,

and to declare, solemnly, to him how deeply I lamented to see him trifle thus with his life, and show so little resolution. His pertinacious refusal had already, I said, caused much precious time to be lost; but few hours of hope now remained; and, unless he submitted immediately to be bled, we could not answer for the consequences. It was true he cared not for life, but who could assure him that, unless he changed his resolution, the uncontrolled disease might operate such disorganization in his system as utterly and forever deprive him of reason! I had now hit at last on the sensible chord; and partly annoyed by our importunities, partly persuaded, he cast at us both the fiercest glance of vexation, and throwing out his arm said, in the angriest tone, 'There you are, I see, a d—d set of butchers, take away as much blood as you like, but have done with it!' We seized the moment (adds Mr. Millingen), and drew about twenty ounces. On coagulation, it presented a strong buffy coat, yet the relief obtained did not correspond to the hopes we had formed, and during the night the fever became stronger than *it had been hitherto*, the restlessness and agitation increased, and the patient spoke several times in an incoherent manner. Surely this was sufficient to convince the most school-bound of the worse than inoperative nature of the measure. Far from it. On the following morning, the 17th of April, the bleeding was repeated twice, and it was thought right also to apply blisters to the soles of his feet! Well might Mr. Moore exclaim, 'It is painful to dwell on such details.' For our present purpose it is sufficient to state, that although the rheumatic symptoms had been completely removed, it was at the expense of the patient's life. His death took place upon the 19th, that is, three days after he was first bled.

"M. Capeman, in 1845, gives the statistics of the bleeding and non-bleeding practice in apoplexy. 'In 1836, when I first repudiated the lancet in this disease, the statistics were all on one side, the only cases of the non-bleeding side of the argument being my own.' The following is from Mr. Capeman's table:

Number bled.....	120	.....	Cured.....	51	.....	Died.....	78
Number not bled.....	26	.....	Cured.....	18	.....	Died.....	8

Showing that, in the cases where bleeding was practised, nearly

two out of three died; whereas, in the cases treated without blood-letting, more than two out of three recovered! What is the worth of general assertions in the face of such evidence?

"In the army hospitals I had an opportunity of studying disease both at home and abroad. There I saw the fine tall soldier bled, for relief of a symptom, to fainting; and what is fainting? A loss of every organic perception—a death-like state, only differing from death in the possibility of a recall. Prolong it to permanency and it is death. Primary symptoms were, of course, got over by such measures; but once having entered the hospital walls, I found that soldier become familiar to me; seldom did his pale countenance recover its former healthy character. He became the victim of consumption, dropsy, or dysentery. His constitution was broken by the first depletory measures to which he had been subjected."

In connection with these cases, reported by Dr. Dickson, we might mention that of our own Washington, who, after escaping the perils of war with its engines of death, fell a victim to the lancet. He was attacked with quinsy—bled to an enormous extent, three times within a few days, and died with all the characteristic symptoms of fatal hemorrhage.

Andral recently reported one hundred cases of pneumonia treated by blood-letting; one hundred treated by antimony and mercury, and one hundred by diet and rest. Of the cases treated by blood-letting, 27 died; of those treated by antimony and mercury, 21 died; by diet and rest, 7 died.

To the candid and impartial observer of facts, the general fatality accompanying this practice is conclusive on this point. Within my own experience I could enumerate hundreds who, while in the bloom of health, upon some trifling ailment have submitted themselves to be bled, and thus offered up their lives upon the altar of this murderous practice. These are a few among the many facts which lead us to condemn the use of the lancet. Another therapeutic agent in the allopathic materia medica which we reject, is mercury with all its preparations; for ample experience has shown, that the allopathic axiom, that medicines which will produce one train of morbid phenomena, will remove an already existing disease, is not successful in combating disease; but, on the contrary, has greatly enlarged

the bills of mortality, and increased the amount of human suffering. It is not true that two diseases will not manifest themselves in the human organism at the same time, as common observation will show. It is true that while patients are laboring under the specific influence of mercury, they, at the same time, suffer from the ravages of other morbid influences equally disastrous to the life and health of the patient. Nothing is more common than to see patients die of idiopathic fevers, syphilis, small-pox, phthisis, pneumonia, pleurisy, inflammation of the brain, stomach, bowels, &c., while under the specific influences of mercury. Statistics show that a much larger portion die, when thus treated, than when left to the unaided efforts of nature. This fact was fully appreciated by Lord Byron after recovering from a very severe attack of fever. He stated that after a week of half delirium, burning skin, hot headache, horrible sensations, and no sleep, by the blessing of barley-water, and refusing to see his physician, he recovered.

Lord Byron was not the only one who realized the inefficiency of the allopathic method of treating disease. A large majority of the most intelligent people have felt, for the last two-thirds of a century, the importance of an entire revolution in our therapeutic resources. The following are the preparations of mercury most in use :

The blue-pill, which is a preparation of quicksilver, rose-leaves and honey.

Bichloride of mercury, or corrosive sublimate.

Chloride of mercury, or Calomel.

Ammonio-chloride of mercury, or White Precipitate.

Red Oxide of mercury, or Red Precipitate.

Bicyanide of mercury.

Sub-sulphate of Peroxide of mercury.

Nitrates of mercury.

Iodide of mercury.

The symptoms of large doses of Bichloride of mercury, as described by Taylor in his Medical Jurisprudence, page 87, are nausea, with vomiting of long stringy masses of white mucus, mixed with blood, followed by profuse purging.

The pulse is small, frequent, and irregular, being scarcely perceptible as the disease advances. The tongue is white and

shriveled, the skin is cold and clammy, the respiration difficult, and death is commonly preceded by fainting, convulsions, and insensibility. The mouth is swollen and the urine is suppressed. The symptoms produced by corrosive sublimate, in the first instance, resemble cholera. The quantity necessary to destroy life, according to Taylor, is from three to five grains.

Chloride of mercury, or calomel, is poisonous in doses similar to corrosive sublimate. A case is reported in the *Medical Gazette* (18 vol., p. 484), in which a boy, aged fourteen, was killed by one dose of six grains of calomel.

It is stated, by Mr. Taylor, that no salivation was produced in this case. Pereira mentions a case of a lady who was killed by a dose of twenty grains of calomel. Sobernheim states that a girl, aged eleven, took eight grains of calomel in twenty-four hours, for croup, and died in eight days from inflammation and ulceration of the mouth and fauces.

Dr. Taylor mentions a case, which occurred at Lesser, where fifteen grains of calomel produced similar effects, and the patient died in eight days. Dr. Christian mentions a case in which two grains of calomel destroyed life by the severe salivation induced, as well as by the ulceration of the throat. Taylor, in his *Medical Jurisprudence*, page 80, mentions a case, where two-thirds of a grain of calomel was given to a boy, aged eight years, producing violent salivation and necrosis of the bones.

In another instance, a little girl, aged five, took daily, for three days, three grains of mercury and chalk-powder. Her mouth was severely affected; sloughing ensued, and she died in eight days. In a third case, a boy, aged eleven years, took three doses of this powder — one of six grains on the 14th, a similar dose on the 17th, and four grains on the 20th, making altogether sixteen grains. The most profuse salivation ensued, sloughing commenced in both cheeks and rapidly extended through them. The boy died in four days. Previously to the exhibition of the mercury he had recovered from an attack of fever. In a fourth case, three grains of blue pill, given twice a day, for three days, making eighteen grains, were ordered for a girl, aged nineteen, who complained of a slight pain in her abdomen. Severe salivation supervened, the teeth separated, and she died in twelve days. Dr. Craigie says the great objection to the employment

of any preparation of quicksilver in the cure of renal disease, consists in the fact, that the use of the mineral is known to render the urine albuminous, to increase the inflammatory state of the system, and to induce the disease, the effects of which, it is expected, to remove. Another evil is that, in persons laboring under symptoms of granular kidney, a very small quantity of mercury induces salivation, and renders the mouth tender and most painful. (*Practice of Physic*, ii., 1148.)

Prof. Z. Freeman reports a case, in the August number of the *Eclectic Medical Journal*, 1854, p. 345, of a girl who took calomel and jalap for a cathartic. It was followed by severe salivation, gangrene and necrosis of the jaw bone. He states, that himself and Dr. Newton took from the jaw four pieces of bone, each over an inch in length and three-fourths of an inch in thickness, including a number of teeth. The jaw was ankylosed and the mercurial bone fœtor was very offensive in this case. He mentions another case which came before him while he was lecturing in Memphis, in which the jaw was necrosed, and the features horribly mutilated, as the effects of mercury. I knew a case of a lady, treated by a homœopathic physician for remittent fever, who took corrosive sublimate, as admitted by the physician, one grain a day, for three days, producing violent salivation and ulceration of the mouth, with a strong tendency to gangrene, followed by persistent vomiting, prostration, and death in the course of five or six weeks. Upon making a post-mortem examination, the mucous membrane of the stomach, and upper portion of the bowels, were found entirely disorganized by the effects of the mercury.

Dr. Norris, surgeon in the Pennsylvania Hospital, stated, in a recent clinic, that he had not prescribed mercury in cases of syphilis for the last twenty years, and that patients did much better than before. Dr. Dick, of Calcutta, states, in a letter to Dr. Sanders, that chronic liver attacks frequently follow the long continued use of mercury. Dr. Nichols, surgeon in the British army in India, states that most of the soldiers, who were treated for venereal disease with mercury, were exceedingly liable to inflammation of the liver. Dr. M. Dessuelles, that from his experience in the treatment of one thousand three hundred and twelve cases of primitive and secondary syphilis without mer-

cury, that the average duration of the disease was only thirty-two days, while those treated with mercury were not only subject to a much longer period of the disease, but a far less number recovered. Prof. J. G. Jones stated, in his lectures, that he had not used a grain of mercury for twenty years. And it is well known that he treated every variety of disease with almost uniform success.

Dr. Pulte, in his *Homœopathic Domestic Physician*, states that mercury causes the following diseases and symptoms. Hence he recommends it to cure the same, upon the principle described by Shakspeare.

“Tut, man ! one fire burns out, another’s burning ;
 One pain is lessened by another’s anguish :
 Turn *giddy* and be helped by *backward turning* ;
 One desperate grief cures with another’s languish ;
 Take thou some new infection to thine eye,
 And the rank poison of the old will die.”

Swelling and inflammation of the glands ; inflammatory fevers, with disposition to perspire profusely ; rheumatic, or catarrhal headache ; scrofulous rheumatic ophthalmia ; syphilitic ophthalmia ; rheumatic prosopalgia and tooth-ache ; dysentery ; mucous or bilious diarrhœa ; influenza.

Symptoms : — Enlargement, inflammation, and ulceration of the glands, with pulsative and shooting pains.

Copious and colliquative sweats.

Vertigo, principally on getting up.

Itching, tickling and burning in the eyes.

Tearing, stinging and drawing pains in the ears.

Bloatedness and swelling of the face.

Tearing, stinging, or pulsative pains in the carious teeth.

Putrid smell from the mouth.

Stinging pains in the throat and tonsils, principally when swallowing.

Acid and mucous taste ; dislike to all food.

Violent empty eructations ; excessive tenderness of the stomach and precordial region.

Loose and dysenteric evacuations.

Frequent, copious emissions of urine, like diabetes.

Catarrh, with febrile shivering.

Difficulty of respiration, with attacks of suffocation at night.
Obstructions and inflammatory swellings of the glands of the neck.

Sharp pains in the shoulders and arms.

Sharp and piercing pains in the hip-joints.

We have given some of the reasons why we reject the use of mercury and all its preparations in the treatment of disease. We urge the same objections against the medicinal use of copper, antimony, arsenic, lead, zinc, tin, in short, against all minerals not found as a component part of the organic structure of the human body. And if our limits would permit, we could produce an array of facts, proving, beyond a reasonable doubt, that the use of all these mineral substances is absolutely disastrous to health and life. The mineral substances, which are constituents of the human organism, and can be used with benefit in the treatment of disease, are the following : *

Lime, or its base, calcium, is combined with the carbonic or phosphoric acid, in the bones and teeth.

Magnesia, in the sebaceous matter of the skin.

Alumina, in the enamel of the teeth.

And iron in the black pigment of the various parts, and in the blood.

Metallic bases of earth : — Calcium, magnesium, silicium, aluminum.

Phosphorus, sulphur, chlorine, and fluorine.

Metals ; iron, manganese, titanium.

Water, found universally, composed of hydrogen and oxygen.

Carbonic acid, found in urine, blood, and sweat.

Carbonates, or salts of carbonic acid and a base.

Carbonate of soda, in serum, bile, mucus, sweat, saliva, tears, cartilage, &c.

Carbonate of lime, in cartilage, bone and teeth.

Carbonate of magnesia, in the sebaceous matter of the skin.

Phosphate of soda, in serum, saliva, in sweat, bones, muscles, &c.

Phosphate of lime, in bones, teeth, cartilage, and the sandy concretions of the pineal gland.

* Wilson's Histology.

Phosphate of soda and ammonia, in urine and blood; but probably only for the purpose of being excreted or thrown off as unfit to constitute a part of the animal body.

Phosphate of iron, in blood, gastric juice, and urine.

Chlorine and its compounds:—

Hydrochloric acid, in gastric juice and in the fluid of the cæcum.

Chloride of sodium, in blood, brain, bone, muscle, cartilage, pigment, and gastric juice.

Chloride of potassium, in blood, gastric juice, milk and saliva.

Chloride of ammonium, in sweat and gastric juice.

Chloride of calcium, in gastric juice.

Sulphuric acid and its compounds:—

Sulphate of potassa, in urine, gastric juice, and cartilage.

Sulphate of soda, in sweat, bile, and cartilage.

Sulphate of lime, in bile, hair, and cuticle.

Sulpho-cyanide of potassium, in the saliva.

Fluoride of calcium, in the enamel of the teeth.

Silica and oxide of manganese, in the hair.

Alumina, in the enamel of the teeth.

Oxide of iron, in blood, black pigment, lens and hair.

Oxide of titanium, in the capsulæ renales.

The above minerals, and their compounds, being constituents of the animal organism, necessarily play an important part in the great drama of organic life; and disease of any of the tissues may, and frequently does occur, from a deficiency of some of the elements of the parts. The blood may become diseased from a deficiency of iron, sodium, or potassium; in this case a proper administration of these articles may be beneficial. A lack of sulphur and soda in the system may cause a deficiency of bile; in which case a supply of them may restore the liver to its normal condition, and the bile to its natural quantity. Thus while all minerals, which constitute a part of the organic structure, not only become assimilated and assist in restoring the abnormal conditions of the system to a healthy state—all minerals which do not enter into the organization of any of the various tissues, when introduced into the system, act as foreign agents, and prove a constant source of irritation, disease and death. Having hinted at what we conceive to be some of the

facts relative to the past and present condition of Medicine, we now proceed more directly to consider some of the principles which guide the great American movement for the reform of the medical profession.

1st. A determined effort to ascertain more precisely than has been done hitherto the natural cause and events of diseases. Or, in other words, the fatality of disease when left to the unaided efforts of nature.

2nd. A determination to understand more fully the *modus operandi* of medicines, and to ascertain their real curative powers.

3rd. To continue our researches in the vegetable, mineral and animal kingdoms for the purpose of developing resources for the removal of disease.

4th. To introduce into the profession a spirit of liberality and progression; to dispense with all creeds and cliques, and to overcome all party prejudice among the different members of the profession.

5th. That it is the duty of every physician to investigate each system of medicine, and make its valuable resources available for the relief of the sick.

6th. That both science and experience have demonstrated that the use of mercury, lead, zinc, arsenic, and the entire catalogue of minerals, incompatible with the organic tissues, is a fruitful source of disease, and dangerous to life.

7th. That blood-letting is one of those dangerous practices, which experience has found to be positively injurious in all cases.

8th. That the pharmaceutical method of compounding a great variety of medicines into syrups, powders, pills, &c., not only prevents the physician from ascertaining their real curative powers, but the action of each is frequently neutralized, and the object defeated for which it was given.

9th. That it is far better to leave the disease to the unaided efforts of nature, than attempt to remove it with medicine, unless its indications are demonstrated by observation and science.

10th. That investigation and research into the nature and cause of disease should be encouraged, and all new facts relative to medical science should receive due attention.

11th. That neither Allopathy, Homœopathy, nor Hydropathy, as an exclusive system of medicine, has arrived at any considerable degree of perfection, as shown by the fact that neither very materially lessens the natural fatality of disease; although, occasionally, each of these may prove successful, as shown by the power of cold water to allay inflammation, which is Hydropathy; by nitrate of silver for aphthæ of the mouth, which is Allopathy; or by rhubarb for diarrhœa, which is Homœopathy. Each of these systems of medication being occasionally applicable in removing disease, they should be understood by the physician, and adopted as indicated.

12th. To discourage, by every honorable means, the baneful practice of constant drugging for all trifling diseases.

13th. To investigate and adopt the physiological and hygienic methods of curing and preventing disease by a proper regulation of the diet, temperature and purity of the air, by bathing, friction, proper clothing, occupation, mental and physical training, &c.

14th. That the practice of physicians, of spending their time in idle conversation, electioneering and otherwise, in pursuits foreign to the profession, disqualifies them for practice; and that, to be a skilful physician, the whole energies of body and mind should be devoted to the profession.

15th. To avoid adopting any set of dogmas in medicine as infallible; bearing in mind, that a constant change of opinion relative to the fundamental practical principles of the art, shows that what men supposed to be true at one time, have been proved to be entirely erroneous at another, and that the only means of advancing medicine to the rank of an exact science, is by the constant rejection of old errors and the reception of new and well-attested truths.

16th. To combine the two extremes of the profession — the ultra-conservative and the fanatical reformer. As conservatives, we would pay due respect to the labors and discoveries of our predecessors in the profession, and adhere with commendable zeal and dignity to those doctrines which long usage, and extensive experience and science have demonstrated to be true. As reformers, we would extend our researches in every direction which promises accession to the already existing stock of medical knowledge,

paying no homage to the aristocracy and learned pedantry of the profession, only so far as it has contributed to the advancement of science. Finally, that we adopt and adhere to the facts of the conservative, and enter into the labors of the reformer, with equal cordiality.

17th. To use every practical means to inform the public upon the subject of medicine in all its departments, that they may understand the true merits of the different systems of medicine, and be prevented from trusting their lives and health in the hands of men ignorant of the principles and practice of the profession.

18th. To cultivate the spirit of true Eclecticism, liberality and progression; and to show the positive necessity that every physician or student of medicine, who would acquit himself with honor and with fidelity to his practice, should not only pass through the ordinary and preliminary course of study, but that his whole time and attention should be devoted to the investigation of all the therapeutic resources of every school of the profession, selecting from each that which science and experience has proved beneficial in the treatment of disease.

It will be seen from the foregoing, that the principles laid down as the basis of the American Medical Reform, cover every department of the science. That they propose to annihilate the boundaries of party limits; to break the shackles which bind the conservative to his dogma; to reinvestigate existing symptoms of medicine, and study anew all the laws of life and health; to ascertain to what extent health may be promoted and disease prevented. This is the work which has been commenced by American Medical Reformers, and to the completion of which, they will consecrate their future labors. They desire to establish a practice based upon scientific principles and inductive experience. They claim that, as a man is composed of the common elements of matter, that to understand his organism in its physiological, pathological and therapeutical relations, is to understand his material structure and forms, with their various movements and forces, and cause of forces, which necessarily includes an intimate knowledge of the great branches of Physical Science, vegetable, animal, and mineral, with all the laws and forces which control them, as electrical, magnetical, chemi-

cal, dynamical, and physiological or organical. The fallacies of all former doctrines in medicine have, in a great measure, arisen from a want of this important knowledge. The allopathist, in establishing his system of medication, that all diseases are cured by medicines that alter or change the structure or physiological forces of diseased parts, entirely omitted the chemical, organic and vital dependencies of matter, as the very disease which he intends to remove, by altering the organic tissue, may depend upon deficiency of carbon, nitrogen, hydrogen or oxygen. As these substances alone possess the power of combining and forming the basis of all the elementary tissues, a deficiency of either of these elements may give rise to a series of pathological changes that no allopathic alterative could overcome, the only remedy being to introduce into the diseased organism its original elements.

Suppose the gastric fluid to be imperfect, as it frequently is, owing to a deficiency of oxygen to unite with the chyle and blood, out of which it is formed. Any attempt to re-establish the normal quantity by alteratives would prove as effectual as an attempt to reorganize water, after the oxygen is set free, by adding alteratives. A deficiency of the carbonates may cause a disease of the liver, lungs, cartilage, bones or muscles. It is a fact that carbon, united with soda, constitutes a large portion of bile; that, combined with lime, it forms one of the elements of the teeth, bone, &c.; that it unites with oxygen in the lungs to maintain animal temperature. Let us inquire, of the allopathist, how many doses of mercury, how much alterative influence, from bleeding and blistering, will compensate for this deficiency. It must be borne in mind that the human system is an extensive organic chemical laboratory, in which is manufactured germ-cells, epithelium, mucus, muscle, nerves, brain, gastric juice, saliva, chyme, chyle, blood, lymph, tears, hair, nails, cuticle, cartilage, bone, &c. The object of this extensive manufactory is to furnish material for the constant demand made by the human body, that it may maintain its integrity and perpetuity. This constant demand arises from the fact, that not only all the inorganic, but the organic elements, which come in contact with the human organism, tend to unite with it and form new compounds, structures and forces, thereby disturbing the natural

relations and dependencies of the human organism upon its organic elements, causing disintegration and destruction of the old tissue, which is supplied by these newly-manufactured products. Any excess or deficiency in the supply is disease. And the only philosophical method of curing or removing such abnormal conditions is to supply elementary deficiencies, prevent excesses, and maintain the natural relation of elementary principles to the human organism. What is true of Allopathy is equally true of Homœopathy. Who, after a moment's reflection, would suppose that chlorosis, which every pathologist admits is dependent upon a deficiency of iron in the blood, could be removed by infinitesimal doses of charcoal, oyster-shell, mercury and arsenic. Or who would suppose that the same remedies would remove disease of the bones, caused by a deficiency of lime and carbon in the system. But, what is still more ridiculous and absurd, in this hair-brain theory of Hahnemann and his followers, is, that their remedies, as mercury, arsenic, belladonna, &c., are capable of causing, and consequently of curing, fifty or sixty diseases each. Jahr, in his Manual of Homœopathy, vol. i., p. 563, states that sulphur will both cause and cure the feeling of despair of eternal salvation. Lachesis (p. 310, Jahr's Manual) produces, and hence should cure absence of religious feeling and fear of approaching death; a small dose of gold, taken internally, produces excessive scruples of conscience, and despair of one's self and others; veratrum produces extraordinary taciturnity, with oaths on the slightest provocation, and raving about religious matters. Aconite (p. 3) produces an irresistible desire to blaspheme and swear, and a sensation as if the mind was separated from the body. Anacardium (p. 33) produces the same swearing symptoms and absence of all moral and religious feelings; (vol. ii., p. 155) a dose of common colocynth (an ingredient in allopathic pills which most people have repeatedly swallowed) produces (says Jahr, p. 189) want of all religious feeling, &c., &c., &c. Lycopodium (club-moss) possesses the same power (p. 319) as sulphur, *i. e.* the feeling of despair of eternal salvation. Pulsatilla causes, and will cure, despair of eternal happiness, with continued prayer and devout aspects (Jahr, p. 468).

Thus, while Homœopathy is equally unphilosophical in its

general principles, it has advanced some of the most extravagant notions relative to the action of medicine ever advocated by any sect in the profession since the magic incantations of the followers of Æsculapius. If it were true that these remedies would produce such terrible conditions of body and mind, the effects would be still more disastrous.

In this case, a patient, who was curing himself for itch with sulphur, would be seized with despair of eternal salvation; also, according to Pulte's *Homœopathic Domestic Practise*, p. 516, he would contract periodical and intermittent head-ache; obstruction of the ears, with humming and redness; inflammation and ulceration of the nose; profuse perspiration day and night; congestion of blood in the head; heat in the face; tooth-ache; sore mouth; dislike for sweets; pain in the abdomen; constipation and piles. We can readily conceive how a person, who was suffering under the influence of the above disease, would be willing to endure many inconveniences to obtain relief, but, that he would exchange it for such a catalogue of ills is quite doubtful; and yet, if the homœopathic doctrine be true, and their notions of the action of remedies correct, such would be the case; and while one morbid condition of the human organism was being corrected, several hundred others would make their appearance. It is frequently claimed, by the disciples of this system, that although the law of *similia similibus curantur* cannot be established by appeal to the philosophy of medicine, still experience teaches it to be true in practice, and they have observed cases to recover while under its influence. This may be true, and yet it may not follow that the medication contributed in the least to the result; as it is now a well-attested fact that, without medical interference, the average mortality of all disease in this country does not exceed seven per cent. Hence, to ascertain the usefulness of any system of medicine, it is necessary not only to observe that some recover, but also how many the profession loses; if above seven per cent., it may be inferred that medication increases the mortality of disease. The limits of this work will not permit me to enter into a full investigation of these different systems of medicine, and show what I conceive to be true relative to all their principles. But in accordance with the principles of American Eclecticism, while we would reject every

hypothesis not founded upon science, we would gladly adopt whatever Homœopathy, Hydropathy or Allopathy contributes to the real advancement of medicine.

The therapeutic principles which guide us, then, are neither exclusively Homœopathic, Allopathic, Hydropathic, Antipathic, Physiological, nor Hygienic; but, by an intimate knowledge of the laws of life and organic elements of the different tissues, with a correct view of all the causes and influences brought to bear upon the human organism, together with a knowledge of all the physiological and pathological changes connected with disease, we are enabled to adopt such principles of cure as the nature of the case may indicate. In the choice of our remedial agents, we claim equal independence and liberality, selecting from all systems such as science and enlightened experience prove to be beneficial to the afflicted, having formed no definite boundary to our researches; for, as yet, no theory of medicine, as an independent system, has been able to stand the test of scientific analysis and experience. The following remarks of Thomas Jefferson, in a letter to Dr. Worcester, are to this point. He says:—"I have lived, myself, to see the disciples of Boerhaave, Cullen, Stahl, and Brown, succeed each other like the shifting figures of the magic lantern," and the practice predicated thereon, of course as evanescent and as changing as its sister theory; and we, of the present time, have, most of us, witnessed one entire revolution in theory and practice of disease; while we are at this very moment, on the last quarter of the full moon glory of a fast fading system. Where is the practitioner so wedded to the past, so tenacious of early practice, and so uncompromising of change as to risk his reputation or the lives of his patients, on the practice of twenty years ago? It is more than probable that before another half century has passed, the present system of Hydropathy, Homœopathy and Allopathy, like the systems of Hoffman, Boerhaave, Cullen, Stahl, and Brown, will be remembered only as a relic of the past. The well-attested truths of each will, no doubt, be treasured up by the American democratic or Eclectic cultivator of medical science, to contribute to that perfection in medicine, which will enable it to take rank with Chemistry, Geology, or Mathematics. To accomplish this is the object of American Eclecticism.

For further consideration of this subject, the reader is referred to my large work on the American Practice of Physic, now in course of preparation.

ANTIDOTES TO POISONS.

THE term antidote had, formerly, a much wider signification, and was applied to the remedies for diseases occurring from natural causes, as well as to the remedies for the derangement of the functions, arising from the direct introduction into the system of a known and material poison.

The selection of appropriate means to counteract the effects of poisons must be determined by a knowledge of the manner in which each particular poison acts; but as our limits will not permit us to enumerate or specify these, some general rules, only, will be given.

The first indication is to remove the poisonous substance; the second, is to prevent or limit its local effects; the third, to obviate the effects on remote organs, supporting their action by appropriate measures, till the injurious impression has subsided. The first of these is to be accomplished mostly by mechanical means. If the poison has been applied to any external part, as by the bite of a viper or rattle-snake, a cupping-glass, or what will answer as well, a wine-glass, tumbler or cup of any kind, from which a part of the air has been expelled, by holding within it a lighted candle for a second of time, should be applied immediately.

If poison has been taken into the stomach, and is not of a kind to arrest instantly the action of the heart, its removal is to be attempted by the stomach-pump, or by exciting vomiting. The stomach-pump cannot well be used without introducing into the stomach a considerable quantity of water, which, by diluting the poison, lessens its violence, in all cases, except that of oxalic acid. But should a stomach-pump not be at hand, we must attempt to produce vomiting by every means in our power. For this purpose, a tablespoonful of flour of mustard, which is mostly to be found in every house, may be put into a tumbler of warm water, and given to the patient; or twenty grains of Sul-

phate of Zinc (white vitriol), dissolved in a pint of warm water, and the disposition to vomit encouraged by tickling the throat with a feather, and pressing on the pit of the stomach. Neither Ipecac. nor Tartar Emetic should be given, as their action is always preceded by much nausea, during which the absorption of the poison is often facilitated.

When the poison is of a corrosive or irritant nature, instead of losing time in seeking the means of causing vomiting, it is in general advisable to adopt the second rule, and attempt to prevent or limit its local, and thereby its remote, effects. To accomplish this we must ascertain what the poisonous substance was from which the patient is suffering, and must also know how it acts, as upon this depends the success of our treatment. The objects we should have in view are either to dilute, and so weaken it; to supply from an external source the particular principle which the poison would abstract from the coats of the stomach; or, by adding something to it, so change its nature as to render it comparatively or altogether harmless, which last will always be effected if we can succeed in forming an insoluble compound. The first may be done by giving plenty of warm water; and when we know the particular poison, if the warm water can be made the vehicle of an antidote, the second or third object will also be ensured. Suppose Sulphuric Acid (oil of vitriol) has been swallowed; add to the water, chalk, magnesia, soda, saleratus or soap; the acid will form with these substances purgative salts, and will, by their action on the bowels, assist in lessening the inflammation caused by the poison before its being neutralized. So when Sugar of Lead (acetate of lead) is swallowed, by giving Epsom Salts (sulphate of magnesia) we form an insoluble sulphate of lead, which will be discharged by the bowels, operated upon by the magnesia, which has been freed from the sulphuric acid. Corrosive Sublimate (bichloride of mercury) abstracts from the coats of the stomach the albumen which they contain, by which it is converted into proto-chloride, or calomel; now if, by giving white of egg, which is pure albumen, we supply it with the principle which it would otherwise obtain from the coats of the stomach, we shall preserve these entire.

Such means, then, are antidotes properly speaking; for the

means by which the secondary or remote effects are to be combated, deserved rather to be termed counter-poisons. The counter-poisons are of no small value in cases of poisoning by the corrosive or irritant, while they are of the utmost importance in the treatment of the sedative and narcotic poisons. To administer these appropriately, we must know which of the vital organs the poison most speedily affects. When it affects the heart, the symptoms greatly resemble syncope (or fainting), and as such poisons are the most dangerous, agents, which act as rapidly as the poisons, are alone to be trusted to; such agents are to be found among the diffusible stimuli, ammonia, or its carbonate, i. e. smelling-salts, applied to the nostrils, or dissolved in water and taken into the stomach, warm brandy and water, &c. Where it chiefly affects the spinal marrow, there occur spasms and difficulty of breathing; when the brain, there is a partial or complete insensibility (coma), often with, at first, full pulse, flushed face, and laborious breathing, resembling apoplexy. In such a state of affairs, artificial respiration, with the administration of coffee and vinegar, greatly contribute to save the patient.

Antidotes to Vegetable Alkaloids.

In poisoning by opium, salts of morphia, hemlock, aconite, belladonna, strychnine, colchicum, &c., take iodine, gr. iij; iodide of potassium, gr. vj; water, 16 ounces. The stomach having been emptied, the mixture is to be given by glassfulls, still encouraging the vomiting; and to be followed (in the case of narcotics) by strong infusion of coffee. Purified animal charcoal absorbs and renders inert the active principles of many vegetable poisons, given in doses of an ounce or more, diffused in warm water.

Antidotes to Metallic Poisons.

The salts of mercury, copper and lead, are decomposed by the hydrated proto-sulphuret and per-sulphuret of iron, and the compounds produced are comparatively inert. The antidote for poisoning by arsenic is the hydrated sesquioxide of iron. It

may be made by adding carbonate of soda to the muriate of iron. It should be given in the moist state, mixed with water—after being once dried, it loses much of its power.

When given in time, magnesia and chalk is an antidote for the mineral acids and oxalic acid; albumen (white of egg) for corrosive sublimate and verdigris; bark, for tartar emetic; common salt for lunar caustic; sulphate of soda or magnesia for sugar of lead and muriate of baryta; vinegar and oil for the fixed alkalis. These substances act either by neutralizing the corrosive power of the poison, or by forming with it an insoluble compound.

From what has been said upon this subject, the necessity of an acquaintance with it must be sufficiently clear, not only to ensure our doing right, but to prevent us from doing wrong. By administering an ill-timed antidote, we may often hasten the fatal event; as where vinegar is given when opium has been swallowed, before it has been ejected from the stomach; and by throwing tobacco smoke into the bowels of a person apparently drowned, we extinguish the feeble spark of life, which might have sufficed to reanimate him, but for such injudicious interference.

AN EPITOME

OF THE

AMERICAN ECLECTIC PRACTICE OF MEDICINE.

EPHEMERA.

EPHEMERA is a fever which lasts but one day. Its symptoms are chilliness and anorexia or indifference to food, followed by a hot skin, flushed face, with hard and frequent pulse. In the course of from sixteen to twenty-four hours, these symptoms yield to a gentle perspiration, which lasts one or two hours, leaving no trace of fever save slight debility. It is mostly confined to children, and may be considered the simplest form of fever, requiring only mild treatment.

TREATMENT.

Give a warm bath by immersing the patient in warm water, or by sponging the surface frequently in warm saleratus water. If the head is hot, apply a towel wrung out of cold water, and change often.

If the fever is persistent, add ten drops of the Tinct. of Aconite to ten tablespoonfuls of pure water, and give one teaspoonful every half hour until the fever subsides. If the bowels are confined, give a warm water injection. Warm or cold packs may be resorted to in case of local congestion.

INTERMITTENT FEVER, OR AGUE.

SYMPTOMS.

Febrile paroxysms occurring at regular intervals of longer or shorter duration. But mostly recurring every twenty-four, forty-eight, or seventy-two hours. The twenty-four hour type is the Quotidian, the forty-eight hour the Tertian, and the seventy-two hour the Quartan. The interval between the paroxysms is called the Apyrexia. The period from the commencement of one paroxysm to the end of the next is called the revolution. Either type of this fever may appear in a double form. Thus, Quotidian frequently occurs twice a day, producing double Quotidian. The Tertian and Quartan, when occurring in a double form, produce a double paroxysm every second and third day. The double daily paroxysms have sometimes been ascribed to the double Tertian. And their occurrence at different hours on alternate days, together with the difference in the severity of the paroxysms, have been described by Prof. Jones as diagnostic symptoms of double Tertian. But having frequently observed the Tertian type manifesting itself in double paroxysms every other day, with a perfect immunity from the disease on the Apyrexial day, I am led to infer that the double daily paroxysm, ascribed to the double Tertian, is only one modification of double Quotidian. This fever is generally preceded by languor, pain in the bones, irregular bowels, and alternate changes in the urine, which characterize the type of the approaching disease by occurring at the same regular intervals, and lasting the same length of time. These changes in the urine are from a light limpid to a dark yellow appearance. The tongue becomes covered with a white thin coat, and from one to two hours before the chill, the spleen yields a peculiar elastic resonance,

and becomes considerably increased in size. About this time distinct rigors or chills are felt, passing up the back and down the legs; the teeth chatter, the nails become purple, the skin has the appearance of goose-flesh (*cutis anserina*) with Horripilations. If the chill lasts for any considerable length of time, there will be oppressed breathing, with precordial pressure.

In the course of from fifteen to thirty minutes these symptoms gradually subside, and at first a mild fever succeeds, which continues to increase until the skin becomes dry and hot. The pulse increases in fulness and frequency, beating from 100 to 120 per minute. There is violent throbbing of the carotid artery, severe pain in the head, with dryness of the secretions, producing thirst, and scanty and high-colored urine. There is also much restlessness and uneasiness throughout the entire Pyrexia.

These symptoms, modified in different individuals and localities, last from one to six hours, when they become mild, and terminate in the sweating stage. The skin now becomes covered with a profuse perspiration, the pulse becomes soft and natural, the respiration easy, and the patient feels as if almost restored to a state of health.

TREATMENT.

On the approach of the cold stage, the feet should be placed in warm water, and the patient caused to drink freely of some warm tea. After which he should be placed in bed, with covering of hot flannel, and jugs of hot water to the feet. As soon as the fever appears, the extra covering should be removed, and from one to ten drops of the Tinct. of *Veratrum Viride* should be given every half hour until the fever subsides. Cold packs should be applied to the head, and hot sinapisms to the feet. The body should be frequently sponged in warm broke water, to which may be added a little whiskey.

During the Apyrexia, the following compound may be given for the purpose of interrupting and preventing the return of the paroxysm :

R Eupatorin gr. xx.
 Cornine..... gr. xx.
 Citrate of Iron gr. x.

Mix, divide into six powders, and give one every three hours, or oftener if it is necessary, in order to have them all taken before the return of the paroxysms.

If the paroxysms return, the same treatment may be pursued as at first, during the cold and hot stages.

After which, give the following compound :

R Viburine..... gr. x.
 Rhusine gr. x.
 Salicin..... gr. xxx.

Mix, divide into six powders, and give one every three hours, or oftener as the case may require.

Or,

R Bebeerine gr. xx.
 Quinine..... gr. x.
 Phosphate of Iron..... gr. x.

Mix, divide into six powders, and give as above.

Or,

R Quinine..... gr. xx.
 Bitartrate of Potassa..... gr. xxx.

Mix, divide into six powders, and give one every three hours.

Or,

R Chinoidin..... gr. xx.
 Capsicum..... gr. xx.
 Santonine..... gr. xx.

Make ten pills, and give one every two hours.

Or,

R Syrup of Bone Set..... Oss.

Chloride of Sodium (Common Salt)..... ʒj.

Mix, dose 1 oz. every hour during the revolution.

ʒj of pulverized Sassafras Bark, taken at intervals of one or two hours during the revolution where the stomach will tolerate it, is generally sufficient to interrupt the paroxysms. Also a strong infusion of Strawberry root, taken freely during the interval, will generally effect a complete intermission.

After the paroxysms have been entirely interrupted, a radical cure should be attempted by giving the patient a mild alterative, such as Euonymine, one or two grains, three or four times a day. If the bowels are costive, and do not yield readily to the Euonymine, add $\frac{1}{8}$ or $\frac{1}{4}$ of a grain of Podophyllin, and give sufficiently often to maintain them in a soluble state.

If the spleen continues permanently enlarged, Diuretics of Marshmallow and Cream of Tartar should be drunk freely.

On the seventh, fourteenth, twenty-first, and twenty-eighth days succeeding the last paroxysm, one of the anti-periodic compounds should be given as at first.

If the patient resides in an ague district, daily baths of warm lye water, together with a free use of Cream of Tartar and Marshmallow, will have a tendency to prevent a recurrence of the disease.

REMITTENT FEVER.

Remittent Fever, like Intermittent, is generally preceded by lassitude and yawning, with soreness and stiffness of the muscles, especially those of the neck and calves of the legs. The tongue is covered with a light yellow coat.

The countenance is shrunken, pale, and of a leaden hue. The conjunctiva presents a congested appearance. The urine is thick and of a dark yellow color. The bowels are costive. The liver is congested, and yields flatness on percussion.

There is sense of weight in the Hypochondric and Epigastric regions. Creeping sensations of cold are succeeded by flushes of heat, the taste in the mouth is metallic, the skin is sallow, and sleep is disturbed by alarming dreams. These symptoms increase in intensity, until the attack of the disease is established. As the hot stage becomes developed, much of the pain about the legs and back frequently abates, although it often returns at the next exacerbation. Frequently, there is a sensation of chilliness, lasting from ten minutes to one hour, during which there is excessive thirst, nausea, and vomiting, mostly rejecting the fluids and medicine taken. There is intense fever with much tenderness of the Epigastrium and right Hypochondrium, which becomes painful upon pressure. The countenance is flushed, the eye has a wild expression, with a violent pain in the head, and in some cases delirium. The pulse is frequent, beating during the fever from 120 to 130 per minute. It is sometimes small and irregular, at others full and forcible. The tongue is mostly brown, with a dry streak through the middle. The bowels are costive, but, when acted upon, the discharges are black or yellow. The urine is scanty and muddy. These symptoms usually continue from six to ten hours.

The febrile paroxysm is superseded by a gentle perspiration on the head and shoulders, rarely extending over the entire body. There is now a mitigation of all the paroxysmal symptoms; yet there is by no means a perfect Apyrexia. The pulse is still quick and irritable, with Tinnitus Aurium, lassitude and much debility. This state is called the remission, and lasts from one to three hours,

when the febrile symptoms recur, and gradually increase, until they acquire their former intensity, and do not subside until after a period longer than that occupied by the first paroxysm. In the subsequent exacerbations, the symptoms all become aggravated, except the chill, which generally becomes less marked each succeeding paroxysm. These exacerbations generally occur in a double Quotidian form, although I have frequently observed them, both of single and double Tertian, and Quartan.

TREATMENT.

This fever, if timely treated, yields with much readiness to mild antiperiodic, and alterative remedies. As for instance, in the forming stage, combine thirty or forty grains of Cornine with equal parts of Euonymine divided into six powders, and give one every two or three hours, until a full antiperiodic and alterative impression is produced. This, with rest, and free bathing, will generally arrest the disease.

During the cold stage the patient should be placed in bed, and a hot pack be applied to the bowels, and also to the regions of the liver and spleen. Hot sinapisms should be placed along the spine and the calves of the legs, extending to the ankles and feet. As soon as the fever makes its appearance, the sinapisms should be removed, and the packs changed to tepid ones. The body should be freely sponged in warm lye water, every hour or two, as long as the fever lasts. The head should be packed in towels wrung out of cold water, and from ten to twenty of the Intermittent drops be administered every half hour.

These drops are composed of equal parts of fluid Ext. of Lobelia, Cypripedin and Scutellaria.

If the stomach will not tolerate them, from one to ten drops of the Tinct. Veratrum Viride may be given every fifteen or twenty minutes, until the same effect is produced.

After the remission is fully established, the following antiperiodic compound may be given.

R Quinine..... gr. xx.
 Phosphate of Iron gr. x.
 Ferrocyanide of Potassium..... gr. j.

Mix, divide into six powders, and give one every two hours.

Or,

R Bebeerine..... gr. xx.
 Salicine gr. xx.
 Viburin gr. xij.

Mix, divide into six powders, and give one every three hours. If the exacerbation comes on before the powders are all taken, give one eighth of a grain of Veratrine with each alternate powder, till the remission becomes distinct. Or give Tinct. of Veratrum in quantity sufficient to subdue the fever. If this antiperiodic should not completely arrest the disease, before repeating it, the bowels should be moved by giving one gr. of Jalapin, one half gr. of Phytolaccin, mixed with thirty grains of sugar, and given in three doses at intervals of one hour. If this should fail to produce Catharsis, give one teaspoonful of the fluid extract of Antibilious physic every half hour, accompanied with warm water injection until the bowels move freely. After which, give one of the above antiperiodic compounds as before. Or if the stomach become irritable,

R Quinine..... gr. xx.
 Cream of Tartar gr. xxx.
 Simple Syrup $\bar{3}$ ij.

Mix, and give one teaspoonful every hour until all is taken. If the stomach still continues irritable, thirty drops of the Tinct. of Gelseminum, and one grain of Morphine, may be added to the above mixture.

When the paroxysms are very severe, and accompanied

by congestion of some of the vital organs, and the natural increased intensity of the next exacerbation would prove disastrous to the patient, a large and full dose of some antiperiodic, in connection with an intermittent, should be administered at once. As for instance,

R Quinine..... gr. xx.
 Scutellarine..... gr. x.
 Cyripedin gr. x.

Mix, divide into three powders, and give one every hour until all are taken. Or if the approaching exacerbation is near at hand, they may be given at still shorter intervals.

When the paroxysmal form of the fever is removed, little remains to be done, save to repair the local and constitutional injuries produced by the disease. To restore the deranged functions of the liver, one or two grains of Euonymine may be given night and morning.

The tone of the stomach may be restored by adding fifteen grains of Hydrastin to one half pint of Simple Syrup, and one eighth of a pint of gin, of which one or two teaspoonfuls may be given before each meal. If there is a tendency to relapse, or if the disease assumes an intermittent form, as it frequently does, the antiperiodic alterative, and tonic course, should be pursued until the paroxysms are arrested, and the causes removed.

CONGESTIVE OR TYPHUS FEVER.

Much diversity of opinion exists relative to this disease. Some regarding it as a Continued Fever, of a highly contagious character, while others consider it as one of the modifications of malarial fever, belonging to the intermittent family.

The limits of this work not being sufficient to admit of a thorough investigation of this subject, the reader is re-

ferred to the American Eclectic Practice, by Jones and Morrow, for a more minute description of this disease.

SYMPTOMS.

It is preceded by languor, headache, disturbed sleep, loss of appetite, followed by chilliness, swollen tongue, and great debility. The bowels are costive, the urine scanty and high-colored, the countenance is dingy and heavy, the eyes watery, with congestion of the conjunctiva, which often extends to the nasal fossa and larynx. There is ringing in the ears, with Epistaxis, and sense of fulness in the Epigastrium.

These symptoms continue for two or three days, when the teeth become covered with dark sordes, the pulse becomes compressible, and the countenance is of a flushed appearance.

The debility becomes more marked from the tenth to the twentieth day, and the symptoms are all more aggravated.

There is incoherent talking, and delirium; the tongue becomes dark and dry, with tremor of the hands, and Subsultus Tendinum. The evacuations become involuntary, with retention of the urine, and interrupted breathing. The surface is covered with cold sweat, and the patient expires.

This fever lasts from ten to thirty days. It is frequently confounded with Typhoid Fever, from which, however, it may be distinguished, by the absence of petechiæ, the costive state of the bowels, and swollen condition of the tongue. Also, it usually assumes a more intermittent or remittent type.

Where congestive fever is about to terminate favorably, the symptoms are much milder than those described above, and from the tenth to the twentieth day there is a diminution in the severity.

TREATMENT.

There is generally more local congestion in this than any of the previous forms of fever, with almost a complete suspension of the assimilating functions. To remove the congestion, and restore the assimilating functions, is the prominent indication to be fulfilled. In the early treatment of this disease, hot packs should be applied to all parts of the body involved in the local congestion, except the head, which should be kept cool. For the purpose of restoring the assimilating functions of the stomach, producing intermission, and interrupting the paroxysmal character of the disease, the treatment should consist of those remedies possessing intermittent, antiperiodic, and stimulating powers, such as the following compounds :

- No. 1. R Quinine..... gr. xx.
 T. Xanthoxylin gr. xx.
 Capsicum gr. x.

Mix, divide into six powders, give one every three hours.

Alternate each powder with ten or fifteen intermittent drops.

Or,

- No. 2. R Quinine..... gr. xx.
 Capsicum..... gr. xx.
 Veratrin gr. ij.
 White Sugar gr. xx.

Mix, and divide into ten powders, and give one every two or three hours.

Or,

- No. 3. R Camphor..... gr. v.
 Quinine gr. xx.
 Viburine..... gr. x.
 White Sugar gr. xx.

Mix, and divide into twenty powders, and give one every two or three hours.

Or,

No. 4. R	Eupatorine.....	gr. xx.
	Alnuin.....	gr. xx.
	Aconitine.....	gr. lss.
	White Sugar.....	gr. xx.

Mix, divide into six powders, and give one every two or three hours.

Or,

No. 5. R	Scutellarine.....	gr. xx.
	Chinoidin.....	gr. xx.
	Oil Capsicum.....	gutt. iij.
	White Sugar.....	gr. xx.

Mix, divide into eight powders, and give one every two or three hours.

To act as an alterative after the fever is broken :

R	Euonymine.....	gr. xx.
	Podophyllin.....	gr. ij.
	White Sugar.....	gr. xx.

Mix, divide into ten powders, and give one every three hours.

The bowels should be kept open, during the treatment of this disease, by giving small doses of neutralizing mixture and Euonymine, and the body should be freely sponged with lye water and whiskey. In cases where there is evident derangement of the stomach, with costive state of the bowels, an emetic and cathartic should be given, previous to the administration of the antiperiodic powders. A teaspoonful of common emetic acetic Tinct. in warm ginger tea, may be given every ten or fifteen minutes, until the stomach is thoroughly evacuated. This should be followed by small doses of Podophyllin and neutralizing mixture, until free catharsis is produced. In cases where there are severe paroxysms, and the local congestion is likely to prove disastrous to the patient, the antiperiodic

should be administered first, and the emetic and cathartic should follow.

But, whether the emetic and cathartic, or the powders be given first, if they fail to arrest the paroxysms, there should be a repetition of the antiperiodic powders after two or three days. During the interval, the patient should drink freely of some mucilaginous preparation, as marshmallow, flaxseed, or slippery elm. At the same time, if the skin be dry, from five to ten drops of Tinct. of Veratrum may be given to produce moisture. If, after pursuing the above course of treatment a week or ten days, the fever still proves persistent, the following compound may be given :

R Ferri Ferrocyanide.....	gr. xx.
Quinine	gr. xx.
Piperine	gr. x.
Gelsemin.....	gr. ij.
White Sugar.....	gr. xxx.

Mix, triturate, divide into ten powders, and give one every two or three hours.

If, during the progress of the disease, there is troublesome Epistaxis, a snuff of Matico leaves may be used, or an infusion of them may be injected into the nostrils. If there is much restlessness and inability to sleep, one-eighth of a grain of Hyosciamin, with Cypripedin and Scutellarin, each one grain, given two or three times a day, will control the symptoms. Where there is tendency to syncope :

R Carbonate of Ammonia.....	gr. v.
Gum Camphor.....	gr. v.
Capsicum	gr. x.
Pulverized Acacia.....	gr. xxx.

Triturate, mix, and give one as often as indicated. During the treatment of this disease, the patient's strength should be maintained by a free use of beef tea, boiled

rice, and such other nutritious food as the stomach will tolerate. During the convalescence, a mild alterative and tonic course should be pursued.

Thus far we have been treating of fevers which are admitted to have their origin in marsh misasm, or are produced by exposure to damp atmosphere contaminated by noxious gases, and decomposing vegetable matter, mostly affecting the spleen, producing Intermittent; or, the spleen and liver, producing Remittent; or, the spleen, liver and nervous system, producing Typhus or Congestive fever. But we now come to the treatment of a disease which is supposed to have its origin in both animal and vegetable miasm. And to confine its morbid influence mostly to the small glands of the bowels, producing more or less extensive ulcerations. This is called

TYPHOID FEVER.

This is a fever which has received quite a number of names. Such as Enteric fever, Continued fever, Bilious fever, Bilious Continued fever, and Nervous fever. But the name by which it is most commonly known is that of Typhoid Fever.

SYMPTOMS.

Few diseases are so remarkably insidious, in their approach, as this fever; its commencement being almost imperceptible. Its incubation generally lasts from three or four days to as many weeks. The patient feels at first slight debility, with a dull and heavy feeling in the head, which continues to increase, terminating in violent frontal headache. By the time the disease becomes fully developed, the limbs are weak, with lameness, and in some cases, rheumatic pains. The bowels are at first slightly constipated; but in the course of a few days, there is a strong tendency to diarrhæa. The pulse is accelerated,

and a creeping chilly sensation is felt, commencing in the back, and passing over the entire body. The chilliness is soon followed by a slight increase of all the symptoms, together with a dry and warm state of the skin. These partial paroxysms, frequently follow each other in rapid succession; but sometimes there is an interval of several hours. The tongue is but slightly coated, and the appetite remains nearly natural until the disease becomes fully developed. Indeed, in a large number of cases which have come under my observation, there is no anorexia during the entire progress of well-marked cases of this disease.

About this time, there may be observed a number of small white vesicles or sudaminæ, at first mostly confined to the abdomen, but afterwards extending over the entire body. These sudaminæ, although frequently appearing in other fevers, are more generally present in this. These vesicles, unless carefully observed, will escape notice, as they are frequently so small as to be scarcely perceptible to the naked eye; being seldom larger than half the head of a pin. To the casual observer, they might easily be mistaken for partial, detached, dermoid scales. But when pricked with the point of a needle, a small quantity of a thin white fluid may be seen to escape. On the fifth day from the appearance of the sudaminæ, another eruption appears which is diagnostic of this disease. It is small, red, or purple spots or eruption, resembling flea-bites.

At first they are very small, so small that without the aid of some magnifying power the larger portion of them cannot be seen. They are at first perceptible just above the ileo-cæcal valve, or about one and one half inches above the crest of the ileum, and extend over all parts of the body; but are mostly confined to small patches of skin corresponding to the ulcerated parts of the bowels. These spots are called *petechiæ*. They are small circumscribed *red spots* when fully developed. They may be

distinguished from most other forms of eruption, by disappearing on pressure, but returning again the moment the pressure is removed. They come and go, appearing and disappearing; but their presence or absence during the active stage of the disease, is a sure index to the state of the bowels. As when the bowel symptoms are aggravated, the petechiæ disappear; but when they become ameliorated, are again visible. This leads me to infer that Typhoid Fever, like Scarletina, is an eruptive disease, and that to maintain the eruption on the surface, is a very important indication to be fulfilled in its treatment. When the disease becomes fully developed, and in some cases, in the forming stage, the bowels yield a marked tympanitic resonance on percussion.

On inspection, a bloated or tympanitic condition of the bowels may be observed, and most marked, beneath the patches of petechiæ.

About this stage of the disease, the nervous symptoms become aggravated, amounting in many cases to delirium, and in others producing great pain in different parts of the body, as the knees, hips, abdomen, side and head. These pains are mostly transitory, or appear in the form of paroxysms. In a few cases the patient inclines to stupor, but generally the opposite is the case, the patient being restless and wakeful. There is a buzzing noise in the head, very much like that caused by full doses of Quinine.

The tongue, by this time, mostly assumes a red appearance, especially upon the tip and edges, and the papillæ become elevated. When it is protruded it may be seen to tremble, and in some cases it is protruded with much difficulty. The pulse increases in frequency, but diminishes in fulness; and in the latter part of the disease it becomes very compressible. The eyes have a watery appearance,

and when the bowels become extensively ulcerated, they have a vacant stare and remain partly open during sleep.

The breathing is laborious, the mouth is half open, and sordes accumulate upon the teeth. The urine, which was somewhat scanty, now becomes nearly suppressed, having a dark red appearance, generally containing a large per cent. of albumen. The bowels continue to bloat, the evacuations are frequent, sometimes watery and frothy, at other times dark and offensive, and mixed with blood; or, the entire discharge may consist of blood amounting to active hemorrhage; being mostly of a dark venous character, although I have seen it of a bright red color, or of the appearance of fresh arterial blood. This symptom, although alarming and dangerous if persistent, is frequently followed by speedy recovery. The skin is not as dry and hot as in many fevers, yet it is frequently pungent, and has a husky feeling. The pulmonary organs generally sympathize with affections of the bowels, and especially is it the case in this disease. Hence we find Crepitant Rhonchus, and frequently a slight cough. If the disease is about to terminate fatally, the symptoms will continue to increase in severity, the patient will become stupid with low muttering delirium, subsultus tendinum, picking at the bed-clothes, coma, and death. Or frequently the ulceration of the bowels may terminate in perforation, followed by a discharge of the contents into the cavity of the abdomen, producing at first much pain, but soon subsiding, the patient becomes covered with a cold clammy sweat, the pulse ceases at the wrist, the bowels evacuate involuntarily, and the patient sinks into the arms of Death.

Or what is more frequently the case, where mischievous medication has been avoided, the symptoms will continue in a somewhat modified form from fourteen to twenty-one days, when they gradually become ameliorated, and the

patient recovers. The average mortality of this disease is only about 10 per cent. or from 15 to 20 per cent. less than it is under Allopathic treatment.

TREATMENT.

In no disease is there more mischief done by an improper course of medicine than in this.

The practice of giving active purgative medicine in the commencement of a fever, with the notion of puking and purging it from the system, has increased the mortality to an alarming extent. For after a drastic purgative, it is almost impossible to cure Typhoid Fever, no matter how prudent your after course may be. First, in the treatment of this disease, the skin should be thoroughly bathed in warm lye water and whiskey. The patient should then be placed in bed, when, if the bowels are costive, they should be moved by warm water injections. If the stomach contains indigestible food, or if there should be a marked indication for an emetic, one-eighth of a grain of Lobelin may be given in a wine-glass of warm ginger tea every ten or fifteen minutes, until the stomach is thoroughly evacuated. After this the patient should drink freely of beef tea and rice gruel. When the stomach becomes settled, or the effect of the emetic has passed off, give from one to five drops of the Tinct. of Aconite in a tablespoonful of water every half hour, until the pulse becomes less frequent and the skin moist. At the same time apply warm lye poultices to the bowels, made by adding one teaspoonful of mustard-seed to ten tablespoonfuls of slippery elm, wet with strong saleratus water. These poultices should be changed as often as three or four times a-day, and continued as long as the bowel symptoms prove troublesome.

When the pulse becomes controlled by the Aconite, the next thing is to interrupt the periodicity of the disease, by giving the following antiperiodic.

R Quinine..... gr. xx.
 Hydrastin..... gr. xx.
 White Sugar..... gr. xxxx.

Mix, divide into six powders, and give one every three hours until all are taken.

At the same time, give freely of mucilage, such as a cold infusion of pulverized marshmallow, acacia, or flaxseed. Also apply water to the head. If the patient is of a bilious temperament, and full habit, the water should be cold. If of a nervous temperament, with low vitality, the water should be tepid, and mixed with a little whiskey. The feet should be kept warm, and the patient remain quiet in bed. At the same time give a sufficient quantity of Aconite to control the fever, and to maintain the petechiæ upon the surface. If there should be diarrhæa, small doses of equal parts of Erigeron and Rhusine should be given two or three times a-day. If the patient be restless and unable to sleep, from the sixteenth to an eighth of a grain of Morphine may be mixed with one or two grains of Cypripedin, and given at bed-time. If the diarrhæa proves persistent, in addition to the Rhusine and Erigeron, injections should be given two or three times a-day, composed of from four to six ounces of starch-water, half a grain of Morphine, and from five to ten grains of Tannin. If the Aconite fail to maintain the petechiæ upon the surface, one half grain of Macrotin should be given in connection with it. If, after pursuing the above treatment for six or seven days, the disease should not be arrested, the antiperiodic should be repeated by giving the following compound :

R Phosphate of Iron..... gr. x.
 Quinine gr. xx.
 Rhusine gr. xx.
 White Sugar gr. xxxx.

Triturate, mix, and divide into six powders, and give one every three hours until all are taken.

At the same time, the Aconite and anti-diarrhæa medicines should be given if indicated. If the bowels should become persistently tympanitic, with extensive ulceration, the Tinct. Bryonia should be substituted for the Aconite, and the patient prohibited from assuming the upright posture, as in all such cases there is great danger of perforation. Where there is much debility, a permanent tonic may be given in connection with Chalybeates, such as the following compound :

R Iron per Hydrogen..... gr. xx.
 Hydrastin gr. xx.
 White Sugar..... gr. xxx.

Triturate and mix, divide into ten powders, and give one every two or three hours, during the interval between the antiperiodic medicine.

During the entire course the patient's strength should be maintained by a free use of the Essence of Beef, made by adding one pound of beef to one quart of water and one half pint of vinegar. Boil the beef till the liquid is one half evaporated. Then strain ; add one pound of White Sugar and eight ounces of rice flour, boil fifteen minutes, strain again, add one half pint of best Old Whiskey, one tablespoonful of salt, and bottle for use. Give the patient from one half to one wine glass full four or five times a-day. Also Porter or Scotch Ale, toast, or broiled beef may be allowed when the stomach will tolerate it. In the event that the medicine already prescribed fails to maintain the petechiæ upon the surface, the Tinct. of Scrophularia may be given to the amount of twelve drops three or four times a day. If necessary to restore the eruption, hot brandy toddy may be given in connection with the above. If symptoms of softening of the brain appear, from one to five drops of Tinct. Phosphorus may be given two or three times a-day in a large quantity of mucilage. If dangerous hemorrhage from the bowels occur :

R Nitrate of Silver..... gr. j.
 Pulverized Acacia..... gr. xxx.

Pulverize, mix, make sixteen pills, and give one every hour until all are taken, or until the hemorrhage is controlled. Or give from ten to fifteen grains of Matico every three or four hours. If an alterative is indicated, small doses of Leptandrin may be given three or four times a day. Where the disease is firmly established, much care must be observed relative to the administration of medicine, never giving any, unless some marked indication demands it; frequently all the medicine necessary is a few drops of Aconite two or three times a-day, with a liberal quantity of mucilaginous drinks, one or two courses of antiperiodics, and a liberal supply of food. Yet where there is a decided indication for treatment, it should be met with promptness. During convalescence, small doses of Hydrastin, in connection with Chalybeates, should be administered.

YELLOW FEVER, OR TYPHUS ICTERODES.

This disease prevails endemically in tropical climates, but only appearing at the North as an epidemic. It is generally supposed to have a compound origin arising from the effects of animal and vegetable miasm.

SYMPTOMS.

The premonitory symptoms very much resemble those of Typhoid Fever, except that they are more rapid in their course. The skin is hot and dry, the face flushed, the respiration hurried, the eyes are red and watery, and there is nausea and vomiting. As the disease advances, these symptoms all become aggravated, and the diagnostic symptoms make their appearance.

The countenance assumes a peculiar cadaverous expression, and is of a bright saffron color. The tongue is soft and swollen, and there is pain in the Epigastrium. During the progress of the disease, the symptoms are variable in different individuals and localities, sometimes running an exceedingly mild course, with little more severity than ordinary Remittent Fever, while in other cases the disease is marked with great prostration. In the first stage the pulse sinks, there is nausea, and vomiting of a dark frothy fluid; the respiration is exceedingly difficult and hurried. There is also low muttering delirium. The alvine evacuations are large and dark, the patient rapidly sinks, and death soon relieves him, unless the disease is arrested by timely treatment.

TREATMENT.

The first thing to be done in the early stage of the disease is to give a stimulating emetic :

R Pulverized Lobelia	gr. x.
“ Bloodroot	gr. xij.
“ Capsicum	gr. xx.

Mix, add one gill of warm water, steep fifteen or twenty minutes, and after giving the patient three or four wine-glasses full of warm ginger tea, give one teaspoonful of the mixture, and repeat until a thorough evacuation of the stomach is produced.

Immediately after the emetic, give a spirit vapor-bath by placing a blanket about the patient and chair, and burning a cup of alcohol beneath it, to produce a copious perspiration: at the same time give the patient freely of weak salt and water to drink. After the sweat, a thorough bathing and rubbing will prepare the patient for bed. The following compound may then be given :

R Quinine	gr. xx.
Chloride of Sodium.....	gr. xxx.
Capsicum	gr. x.

Mix, divide into eight powders, and give one every three hours until all are taken. At the same time, warm poultices should be applied to the abdomen and stomach, and hot sinapisms to the feet and calves of the legs, and a warming plaster along the spine.

When the antiperiodic mixture has been taken, the fever and circulation should be controlled by the use of Aconite, and rest should be induced by giving Cypripedin and Scutellarin, or by small doses of Morphine. The bowels should be moved by the following alterative :

R Euonymin	gr. x.
Jalapin	gr. ij.
Xanthoxilin	gr. x.
White Sugar	gr. xxx.

Triturate, mix, divide into six powders, and give one every two or three hours.

If there is much nausea and vomiting, the following compound may be given :

R Vinegar	Oss.
Common Salt	ʒj.
Capsicum	gr. xx.

Mix, and give one teaspoonful every ten or fifteen minutes, as the symptoms may indicate. If the disease should not yield to the above treatment, within the course of three or four days, the following antiperiodic should be administered :

R Salicine	gr. xxx.
Quinine	gr. xv.
Iron by Hydrogen	gr. xx.
Capsicum	gr. x.

Mix, divide into six powders, and give one every three hours. At the same time give the patient freely of Ess. of Beef as directed under Typhoid Fever. Once or twice a day the patient should be bathed with warm lye water, and allowed to drink of porter or good ale, whenever

the active fever does not contra-indicate. Local congestion or inflammation should be relieved by hot or cold packing, as the case may require. During the convalescence, alterative doses of Podophyllin, with Hydrastin as a tonic, may be given once or twice a day, together with a free and generous diet. If there should be symptoms of a relapse, the antiperiodic remedies should be repeated.

INFLAMMATION.

Inflammation is always located in the capillary vessels. Hence, tissues destitute of these vessels are never capable of taking it on, as the hair, nails, cuticle, and enamel.

Filamentous tissues, on the other hand, as the liver, lungs, and mucous and serous membranes, are very liable to inflammation. The first step towards the inflammatory process is an accumulation of blood, which is congestion. This accumulation may occur either from too slow venous or too rapid arterial circulation. Or it may arise from debility of the capillary vessels, or from all these causes combined. The congestion may disappear by a diminution in the afflux, together with a restoration of the normal functions of the capillaries. Or it may terminate in inflammation by the blood beginning to oscillate in the vessels, adhering at different points until finally it stagnates.

The blood failing to be converted into venous blood, its coagulability is increased so that the globules coalesce and form minute clots. New vessels or canals are formed by globules of blood bursting the vessels and passing into the adjacent parenchyma, reaching another vessel, thus forming new passages through the areolar tissue, which ultimately become capillary tissue. Or the corpuscles may remain in the adjacent parenchyma, producing swelling by effusion. In active congestion, the contractile powers of the vessels are lost by over-distension, the blood stagnates,

the coats of the capillaries become diseased and ruptured, resulting in extravasation or effusion of blood, coagulable lymph, and serous or muco-purulent fluid.

THE SYMPTOMS

Are redness, swelling, pain, and increased heat. The redness is owing to an increased accumulation of blood in the part. The swelling to infiltration, to accumulation of blood and pus, and to œdema of the lymphatics. The pain is produced by the tension, and the pressure made on the nerves of the parts, with the increased sensibility. The heat is caused by oxydation of effete matter and adipose tissue, and retention of natural animal heat.

The termination of inflammation is 1st, resolution; 2d, suppuration; 3d, mortification.

Resolution may be preceded by Metastasis, as in mumps or rheumatism. The symptoms which precede resolution are increased perspiration, diarrhœa, changes in the urine, and hemorrhage. In effusion, we have formation of false membrane, as in croup. Suppuration is the conversion of coagulable lymph into pus. Mortification, Gangrene, or Sphacelus, is the complete death of the part.

TREATMENT.

The first indication to be fulfilled in the treatment of inflammation, is to equalize the circulation, and restore the lost functions of the capillaries.

Veratrum, Aconite, and Gelseminum, with the ligature, will enable us to control the circulation. While Podophyllin, Jaolapin, with Bitartrate of Potassa, will relieve the vessels of the plethora, if that should be a cause of the disease.

But as the treatment of inflammation depends in a great measure upon its locality, the remedies will be given under the head of inflammation of the different tissues.

PHRENITIS, OR ENCEPHALITIS, AND
MENINGITIS;

(OR INFLAMMATION OF THE BRAIN AND ITS MEMBRANES.)

SYMPTOMS.

A vague uneasiness of the mind, defective appetite, dizziness with vertigo. The pulse is hard and bounding, the eyes have a wild and anxious expression. The patient complains of great debility, and a sense of numbness in one side of the body; the numbness being on the opposite side from the location of the disease, and the patient lies mostly on the back. There is ringing in the ears, which very much increases as the disease advances. In the early stage of the disease, the pupil of the eye is preternaturally contracted; but in the latter stage, the pupil is much dilated, and light becomes intolerable.

As the disease advances, there are convulsive muscular movements, with more or less delirium. The respiration is irregular, the skin hot, there is nausea and vomiting, the bowels are confined, and in most cases there is obstinate costiveness. These symptoms may all become aggravated, terminating in subsultus, picking at the bed-clothes, stupor, coma, suppression of the urine, colliquative sweat, stertorous respiration, and death.

Or the symptoms may all become ameliorated, and the patient recover.

CAUSES.

1. Accidents.
2. Intemperance in eating and drinking.
3. Metastasis of inflammation from other parts.
4. Mental excitement.
5. Exposure to atmospheric vicissitudes.
6. Animal and vegetable misasm.

TREATMENT.

After due attention to the cause of the disease, the bowels should be thoroughly evacuated, by giving the following compound :

R Podophyllin gr. ij.
 Jalapin..... gr. j.
 White Sugar..... gr. xx.

Mix, divide into eight powders, and give one every hour until they act as a liberal purgative. At the same time apply ligatures to the legs and arms by placing a bandage around them sufficiently tight to prevent the return of the blood by the veins, but allowing it to pass into the limbs through the arteries. Care should be taken not to produce complete syncope ; but the ligatures should be used sufficiently to deplete the brain and thereby relieve the distended capillaries. The ligatures should be tightened or loosened according to the emergency of the case and the indication to be fulfilled. In removing them, much care should be taken to loosen them one at a time, and at sufficient intervals to allow the blood to return to the body by degrees. At the same time cold packs should be applied to the head, and changed sufficiently often to keep them cool. A warm sinapism should be placed along the spine, and the patient caused to take Aconite until a free diaphoresis is produced. The surface should be freely bathed in strong lye water two or three times a day, together with hot foot-baths.

If the disease does not yield to the above treatment, the purgative should be repeated.

After which the following compound should be given :

R Digitalin gr. j.
 Sanguinarin..... gr. ij.
 White Sugar gr. xx.

Mix, divide into eight powders, and give one every two

or three hours. If there be periodicity connected with the inflammation, give the following compound :

R Quinine.....	gr. x.
Phosphate of Iron	gr. xx.
Veratrine.....	gr. j.
White Sugar.....	gr. xx.

Mix, triturate, divide into ten powders, give one every two or three hours as may be indicated. During the treatment, the patient should be kept quiet, and in bed, and recourse should be had to the ligature, when the determination of the blood to the head should indicate it. The diet should be principally fluid, and of easy digestion.

THRUSH, INFANTILE SORE MOUTH.

This disease mostly occurs in children from one to three months old.

CAUSES.

Unhealthy milk and an accumulation of effete matter and lactic acid, which comes in contact with the mucous surface of the child's mouth, while nursing, producing abrasion.

SYMPTOMS.

Small white specks appearing, either single or in clusters, having a dark and inflamed base, which continues to spread and coalesce until the entire mucous surface is involved in the disease.

TREATMENT.

Remove the cause. Bathe the breast frequently in weak lye water, and thoroughly cleanse the nipple each time before the child nurses, and give the following compound :

R Hydrastin.....	gr. x.
Rhusine.....	gr. x.
Neutralizing Mixture.....	℥ij.

Give the child from fifteen to twenty drops two or three times a day; also wash the mouth in a weak solution of Hydrastin.

FOLLICULAR STOMATITIS, OR NURSING SORE MOUTH.

Symptoms are transparent whitish vesicles on elevated salivary glands. The vesicles break, and the fluid denudes the mucous surface of the Epithelium, causing inflammation and ulceration, the ulcers often extending over the entire mouth, and in some instances to the Œsophagus and stomach, producing general constitutional disturbance.

TREATMENT.

R Neutralizing Mixture..... ʒij.
Salicine..... gr. xxx.
Rhusine..... gr. xx.

Mix, give one teaspoonful every two or three hours during the day. The mouth should be washed in a strong solution of Hydrastin both before and after each meal.

If the disease does not yield to the above treatment, the following antiperiodic and tonic should be given :

R Myricin..... gr. xx.
Cornine..... gr. x.
Iron by Hydrogen..... gr. x.
White Sugar..... gr. xxx.

Mix, divide into ten powders, and give one every three hours; after which give the following mixture :

R Neutralizing Mixture..... ʒij.
Myricin..... gr. x.
Helonin..... gr. xx.

Mix, give one teaspoonful three times a day.

If there is debility, give the gin bitters of the American Eclectic Dispensatory in quantities indicated.

The surface should be bathed every day in warm lye water. The diet should consist of animal broths; broiled beef, rice, bread and milk, &c.

QUINSY—CYNANCHE TONSILLARIS.

SYMPTOMS.

The parts involved in this disease are the tonsils and adjacent mucous surface. They appear red and swollen. The patient complains of great pain and difficulty in swallowing. The pulse becomes quick and hard, and the breathing nasal and laborious.

These symptoms are generally preceded by rigors or chills, alternated with flashes of heat. The tongue is covered with a light coat, the bowels are confined, the eyes are suffused and red, and the face swollen. As the disease advances the swelling increases, and the patient expectorates a thin viscid mucus. The throat, ears and eyes become painful, the breathing and deglutition more difficult, and the patient is compelled to assume the erect position on account of the great dyspnoea.

TREATMENT.

The patient's feet should be placed in hot water, and, in the early stage of the disease, a sufficient quantity of the acetic emetic Tinct. should be given to produce free emesis. After which the surface should be thoroughly bathed in warm saleratus water, and the patient placed in bed, with jugs of warm water to the feet, and an onion poultice to the throat. If there is much fever, from three to five drops of the Tinct. of Veratrum should be given from every half hour to an hour, until the fever subsides.

At the same time the throat should be thoroughly washed by means of a probang, with a weak solution of

nitrate of silver and Hydrastin. The bowels should be opened by small doses of Podophyllin and antibilious physic. If the swelling produces dangerous dyspnœa, the tonsils should be freely scarified with a sharp-pointed bistoury, and a strong solution of sulphate of zinc applied by means of the probang. Also apply to the throat, before the application of each onion poultice, a liniment composed of equal parts of Acetic Tet. of Beef's Gall, Gelseminum and Camphor. The patient should be kept quiet, and during convalescence the diet should be light and nutritious.

OTITIS, OR INFLAMMATION OF THE EAR.

CAUSES.

Local injuries, Scarlet Fever or inflammation of the Eustachian Tubes.

SYMPTOMS.

Pain, ringing in the ears, &c. Diagnosis is easily made with the Speculum.

TREATMENT.

Remove the cause, after which apply hot packs to the ear, and introduce lint, saturated with equal parts of Tinct. of Lobelia and Aconite. If there are constitutional symptoms, give a mild purgative of Euonymine and neutralizing mixture. If there is fever, give Eupatorin one or two grains three or four times a-day; also from five to ten drops of the Tinct. of Gelseminum every two or three hours until the fever abates. If there is ulceration, use a mild zinc wash; Compound Syrup of Stillingia, given in quantities sufficient to act as a mild alterative, will generally be adequate to a cure.

GASTRITIS, OR INFLAMMATION OF
THE STOMACH.

SYMPTOMS.

Vomiting, great thirst, precordial distress, a quick and hurried pulse, tenderness in the Epigastrium, with the tongue mostly dry and hard and the papillæ elevated. The skin is hot and dry, the urine scanty, and the bowels constipated. As the disease advances, the patient is restless and peevish, the countenance has a distressed, shivered and anxious appearance.

The nausea becomes constant, and every substance taken into the stomach is immediately rejected. The appearance of the rejected contents of the stomach is at first a greenish mucus, mixed with the ingesta; but if the disease is about to terminate in mortification, and death, they will become dark, and will finally have the appearance of coffee grounds.

CAUSES.

Worms, irritating substances taken into the stomach, or as is more frequently the case, it is one of the local symptoms of idiopathic fever.

TREATMENT.

After giving due attention to the cause of the disease, the feet should be placed in warm water, and the entire surface of the body thoroughly bathed in broke water and whiskey. After which, from one to ten drops of the Tinct. of Aconite should be given every fifteen or thirty minutes until a gentle perspiration is produced.

At the same time, the bowels should be evacuated by means of stimulating injections, and warm sinapisms applied to the Epigastrium.

After continuing the above treatment for five or six

hours, if the symptoms do not yield, the Tinct. of Bryonia may be substituted for the Aconite, and the patient caused to drink freely of mucilage, as Gum Arabic, Slippery Elm, Flaxseed, &c.

The sinapisms should be removed after having caused irritation, and hot packs applied in their place.

If, after pursuing the above treatment for ten or twelve hours, the inflammation still proves persistent, and the cause of the disease has been removed, a thorough spirit-sweat should be given, and the hot packs continued, and warm sinapisms applied to the feet. Also from one to five drops of the Tinct. Rhus Radicans given every hour until the disease becomes mitigated.

If it assumes an intermittent form, some of the anti-periodic compounds should be administered by means of starch-water injections, sufficiently to arrest the disease.

The diet should be fluid, but nutritious.

DYSPEPSIA, OR INDIGESTION.

CAUSE.

Debility of the stomach, and whatever prevents a normal secretion of gastric fluid.

SYMPTOMS.

Pain in the stomach after eating, palpitation of the heart, sharp and pinched features, furred tongue, irritable temper, wakefulness, a costive condition of the bowels, dry and husky skin, and debility.

TREATMENT.

R Populin..... gr. xx.
 Sanguinarin..... gr. x.
 White Sugar..... gr. xxx.

Triturate, mix, divide into sixteen powders, and give one four times a day. After which,

R Hydrastin..... gr. xxx.
 Syrup of Sugar..... Oss.
 Muriated Tinct. of Iron..... ℥j.

Mix, and take one teaspoonful three times a day before meals.

If the above prescriptions do not give relief, the following compound may be administered :

R Neutralizing Mixture..... Oss.
 Aletrin..... gr. x.
 Chloride of Sodium..... ℥ss.

Mix, and give one teaspoonful three times a day.

A mixture of animal and vegetable diet should be taken at regular intervals, and thoroughly masticated.

A free state of the bowels should be maintained by the use of bran-water, salt and water, ripe fruit, etc. ; and the surface should be sponged several times a week in cold or warm water, as circumstances indicate.

ENTERITIS, OR INFLAMMATION OF THE SMALL INTESTINES.

In simple Enteritis, there is deep-seated pain in the umbilical region, and sometimes in other parts of the intestinal tubes. The pain is more or less constant, yet it is subject to paroxysmal aggravations, and is increased by pressure. The patient manifests restlessness by constant motion of the arms and legs. As the disease advances, the pulse becomes hard and wiry, the skin dry, and sometimes pungent, the tongue is covered with a dark brown coat ; and in later stages, there is diarrhæa and a bloated condition of the bowels.

TREATMENT.

The stomach should be thoroughly evacuated by Lobelia and Sanguinaria, in quantities sufficient to produce active emesis. As soon as this is effected, give a spirit vapor-bath, and wash the patient in strong saleratus water. A sinapism should be placed over the bowels, and Aconite administered in one or two-drop doses every ten or fifteen minutes until free diaphoresis is produced. If the symptoms should not become mitigated in ten or fifteen hours, the following antiperiodic should be given :

℞ Gelsemin gr. i.
 Sanguinaria gr. x.
 White Sugar gr. xxx.

Triturate, mix, divide into ten powders, and give one every two or three hours. At the same time, if the fever prove obstinate, one or two drops of the Tinct. of Bryonia may be given between each powder.

When the sinapism has produced free counter-irritation, warm packs may be applied to the bowels.

If the disease assumes a periodic character, some of the antiperiodic mixtures should be given. The convalescence should be carefully watched, and the diet well regulated.

DYSENTERY, OR COLITIS, (AN INFLAMMATION OF THE COLON).

SYMPTOMS.

Acute dysentery commences with uneasiness, soreness, and sense of weight in the lower part of the bowels, and a constant desire to go to stool.

In the course of from five to twenty-four hours, the diarrhæa is changed to mucus mixed with blood. As the pain and tenesmus increase, the skin becomes hot and dry, the urine red and scanty, and not unfrequently there is much pain in micturition.

The tongue is covered at first with a light coat, which soon becomes heavy and of a dark brown color. The pulse varies in frequency and fulness according to the severity of the case. In children, there are more or less brain symptoms, which not unfrequently prove the most obstinate feature of the case.

CAUSES.

In children the disease is not unfrequently caused by ascarides in the lower portion of the rectum. Also by anything which tends to obstruct the portal circulation, and causes a sudden determination of the blood from the superficial capillaries to the deep capillaries of the bowels.

TREATMENT.

To ascertain the cause, and as far as possible to remove it, are the first things to be done in the treatment of this disease, as well as all others.

If the tongue is coated, and the stomach in a condition to indicate it, an emetic of Emetine or Lobelia may be given. During the operation, the patient should drink freely of some warm aromatic tea.

As soon as the effect of the emetic has passed off, the spirit vapor-bath should be given; after which the surface should be thoroughly bathed in warm lye water, and the patient placed in a recumbent position in bed.

If there is obstruction of the portal circulation from congestion of the liver or otherwise, the following purgative should be given:

R Podophyllin	gr. x.
Neutralizing mixture	℥ij.
Pulv. Acacia	gr. x.

Mix, and give one teaspoonful every half hour until free catharsis is produced. Afterward give the following anti-periodic:

R Chloride of Sodium	3j
Quinine	gr. x.
Oil of Gaultheriæ	gutt. vi.

Triturate, divide into ten powders, and give one every two or three hours until all are taken.

During the administration of the powders, if there is much tenesmus, injections of starch-water, to which are added two or three grains of Tannin, and from one-fourth to one-half a grain of Morphine, should be given every five or six hours.

If there is frequent pulse, connected with fever, Aconite or Veratrum should be given in sufficient quantities to maintain a gentle moisture of the skin.

If, after giving the antiperiodic, the passages should still be frequent and painful, the following compound may be given :

R Neutralizing Mixture.....	3ij.
Myricin and Rhusin	aa gr. x.
Morphine	gr. ij.
Ess. of Anise	3i.

Mix, and give from one-half teaspoonful to a teaspoonful every two or three hours, as the case may indicate.

Also apply the following liniment to the abdomen :

R Chloroform	3jss
Tct. of Camphor	3ij.
Oil of Olives	3iij.

Mix, and apply to the bowels four or five times a day, followed by the application of hot dry flannel.

If the passages should be large and consist principally of blood, from five to ten drops of the oil of Erigeron should be given every two or three hours, in connection with the above treatment.

Where brain symptoms prove troublesome, the bowels should be kept open, and a free use made of Capsicum,

and diuretics, in connection with the other remedies. If there is heat in the head, cold packs should be applied, also sinapisms to the back of the neck.

The diet should consist of beef tea, boiled rice, soft ripe fruit, and such other articles of food as the condition of the patient may indicate. The convalescence should be watched with great care, as regards both diet and exercise.

ACUTE PERITONITIS, OR INFLAMMATION OF THE PERITONEUM.

SYMPTOMS.

There is a sharp pain in the abdomen over the region of the part inflamed. Soon after the first attack, there is generally more or less of a chill, followed by a decided reaction and fever. The pulse soon becomes quick, wiry, and weak, and the tongue is covered with a light brown coat. The abdomen is tympanitic, and frequently there is nausea and vomiting. The patient assumes a recumbent position, as pressure causes much pain. The skin is hot and dry, the urine generally scanty and high-colored. As the disease advances, the extremities become cold, the eyes have a peculiar anxious expression, the body is covered with a cold clammy sweat, and the patient expires. Or these symptoms may all become ameliorated, and result in gradual recovery.

TREATMENT.

R Podophyllin..... gr. i.
Ext. of Anti-Bilious Physic..... $\bar{\text{z}}$ i.

Mix, and give one teaspoonful every fifteen minutes, until it operates as a cathartic. After which, give the following antiperiodic :

R Quinine.....	gr. xx.
Gelsemin.....	gr. i.
Capsicum.....	gr. xx.

Mix, divide into six powders, and give one every three hours, until all are taken. At the same time, if there is fever, give Aconite sufficient to control it. Also apply a poultice to the abdomen, made of one pint of oil meal, and one tablespoonful of mustard, wet with warm water, and change as often as becomes necessary, to keep up a gentle irritation of the surface.

If, after the antiperiodic has been given, the symptoms still prove persistent, the cathartic should be repeated, followed by the Muriated Tinct. of Iron, from five to ten drops every two or three hours until the symptoms abate.

The above treatment, together with frequent bathing of the surface, is generally sufficient to control the disease.

PNEUMONIA, OR INFLAMMATION OF THE LUNGS.

SYMPTOMS.

The most prominent is a cough, with difficulty of breathing, followed by a hot skin, and increased fulness and frequency of the pulse.

In the *second* stage the cough becomes loose, and the expectoration free and copious, having a rusty appearance and being at times mixed with blood.

In the third stage, the Sputa assumes more of a purulent appearance, and the respiration is sufficiently hurried to produce more or less Dyspnœa.

The physical signs are *Crepitant Rhonchus* in the first stage, *Tubular* or *Bronchial Rhonchus* in the second stage, and when there is Hepatization in the third stage, there will be either *blowing tubular*, *sniffing metallic*, or

Crepitant Rhonchus, also dulness on percussion. If there is pulmonary abscess, there will be *amphoric tubular*, or *crack-metal rhonchus*. The vocal resonance will be either bronchophonous or pectoriloquous.

The varieties of pneumonia are numerous. At one time, it is marked by highly inflammatory symptoms; at another, it assumes more of a Typhoid character, and being connected with great debility, the entire phenomena of the disease resembles that of incipient Phthisis.

The prognosis of pneumonia, is altogether dependent upon the treatment. The mortality under *Allopathic* treatment being from fifteen to thirty per cent., while under a judicious *Eclectic* course, it scarcely amounts to one half of one per cent.

TREATMENT.

The prescriptions for simple sthenic pneumonia, are easily indicated; very few medicines being required.

The patient should be put upon the Tinct. of *Veratrum Viride*, in quantities sufficient to control the inflammatory action. In adults of full and plethoric habit, from five to ten drops may be given every half hour, until the inflammatory stage has passed.

A large cold pack may also be applied to the chest. When the inflammation has subsided, expectoration may be facilitated by giving equal parts of the Syrup of *Lobelia* and *Sanguinarin*, every two or three hours.

If there is periodicity to the disease, after the active stage has passed, *Ceracine* and *Cornine* may be given in sufficient quantities to produce an antiperiodic effect. At the same time, continue the syrup. If the disease should assume a *Typhoid* form, *Capsicum*, in connection with small doses of *Carbonate of Ammonia*, should be given. Beef tea, and small quantities of wine, may be administered, to maintain the integrity of the constitution, and

the patient's strength. If there should be bronchial symptoms, with a persistent cough, twenty or thirty drops of the Syrup of Stillingia should be given three or four times a day.

Where there is Hepatization of any portion of the lungs, small doses of Sanguinarin and Iodide of Potassium may be given. For further consideration of this subject, the reader is referred to Newton and Calkins on Thoracic diseases.

COLIC, SPASMODIC, OR BILIOUS COLIC.

SYMPTOMS.

It commences with very acute pain about the region of the navel. The patient complains of great thirst, and is generally costive. He vomits a hot, bitter, and mostly a yellow bile, which at first seems to afford some relief, but is quickly followed by the same violent pain as before. As the disease advances there is an increased propensity to vomit, which becomes almost continual. The natural motion of the intestines is so far inverted as to render an evacuation almost impossible. If the patient is young and plethoric, the pulse will be hard and resisting, the surface will be covered with a cold clammy sweat during the paroxysm of pain. The vomiting will also prove very persistent.

This disease may be distinguished from inflammation of the bowels by pressure upon the abdomen, which in bilious colic always affords relief; but, on the contrary, in inflammation of the bowels it increases the pain and aggravates all the symptoms.

CAUSES.

The causes of this disease may be various, but the effect is a spasmodic contraction of the muscles of the bowels.

TREATMENT.

R Dioscorine..... gr. x.
 Pulv. Camphor..... gr. iij.
 White Sugar..... gr. xx.

Mix, divide into ten powders, and give one every fifteen minutes until the patient is relieved. After which,

R Gelsemin..... gr. ij.
 Podophyllin..... gr. ij.
 Capsicum..... gr. vi.
 White Sugar..... gr. xx.

Mix, divide into five powders, and give one every hour, in a teaspoonful of Neutralizing Mixture, till it operates as a cathartic.

If the bowels resist the action of the cathartics, they should be injected with warm water, and small quantities of Lobelia Tea. Also apply a poultice to the bowels made of oil meal and mustard; say ten tablespoonfuls of oil meal to one of mustard. The patient should be kept warm and in bed. During the convalescence the diet should be of easy digestion and nutritious.

LEAD COLIC.

SYMPTOMS.

This disease is preceded by languor, pallor, general debility, pain in the Epigastrium, and a twisting griping pain in the region of the umbilicus.

TREATMENT.

R Sulphuric Acid..... gutt. xxx.
 Pure Water..... “ ʒi.

Give from ten to twenty drops five or six times a day for several days. During the time, a Lobelia emetic, vapor baths and mild purgatives should be given.

When the active stage of the disease has passed off, vegetable tonics, wine, porter, and a nutritious diet, are all that will be required to restore the patient to health.

 SCARLATINA.

Scarlatina is divided into three varieties, indicating the different degrees of severity of the disease, viz : Scarlatina Simplex, Scarlatina Anginosa, Scarlatina Maligna.

SYMPTOMS.

The mild form of this disease is preceded by coldness and shivering, to which succeed febrile heat, thirst, and an accelerated pulse. About the fourth day the face swells, and irregular patches of a florid red color make their appearance on different parts of the body. In the course of four or five days, the eruption disappears, and the cuticle falls off in branny scales.

The second variety is marked by previous lassitude, dejection of mind, pain in the head, soreness, and pain in the muscles of the neck and shoulders, shivering and fever. To these succeed nausea, vomiting, difficulty of swallowing, a hurried respiration, and frequent sighing. There is a quick, weak, and sometimes a hard pulse ; the skin is red, hot, and dry ; the tongue is dry, and florid along the edges ; and there is great thirst.

About the third day the redness about the face, neck,

and chest, becomes more intense, and the glands of the lower jaw are painful to the touch. In a few hours the redness becomes diffused over the entire body. About the fifth day the redness abates, and a brown color succeeds, the skin becomes rough, and falls off in large scales.

In the third variety, in addition to the common symptoms, there is great prostration, the surface has a dark livid appearance; there is nausea and vomiting, a quick and feeble pulse, and laborious breathing. There are also ulcerations on the tonsils and adjoining parts, covered with dark sloughs, and surrounded by a livid base. The efflorescence appears about the third day, but without relief. It assumes a dark purple appearance. Delirium, a debilitating diarrhæa, and hemorrhage, ensue, and in a great majority of cases under Allopathic treatment, death closes the scene.

TREATMENT.

But little treatment is necessary in simple Scarlatina. The patient should be kept in bed, and warm. The skin should be thoroughly bathed in warm lye water, and the surface anointed, after each bath, with sweet oil. A warm bread poultice should be applied to the neck, and from one to three drops of the Tinct. of Belladonna given five or six times a day.

In the Anginose form a more active treatment is indicated. A hot onion poultice should be applied to the throat, and changed every four or five hours. Every time the poultice is changed, the neck should be bathed with a liniment composed of the following ingredients :

R Oil of Stillingia	ʒss.
Tinct. of Capsicum	ʒij.
Oil Origanum	ʒj.

Mix.

.Bathe the entire body, as in the simple form, with lye water, but add to every ounce of the sweet oil one-half

ounce of pyroligneous acid, and anoint the surface as before. Add twenty grains of triturated Belladonna to half a tumbler of soft water, and give one teaspoonful every half hour. Also, give the following compound :

R Capsicum gr. xx.
Trit. Hydrastin gr. xx.

Mix, divide into ten powders, and give one every three hours in a teaspoonful of sweet cream. These medicines should be continued until the disease abates. At the same time keep the bowels in a soluble condition by the use of warm water injections.

There is always extensive capillary congestion in the malignant form, not only in the glands of the throat, but through the entire system. To remove this capillary congestion, and bring about a reaction, is the first indication to be fulfilled in this form of the disease. For this purpose the following compound may be given :

R Xanthoxylin gr. xx.
Capsicum gr. x.
Hydrastin gr. xx.

Mix, divide into ten powders, and give one every half hour. If practicable, put the patient in a warm bath; otherwise, apply hot packs to the bowels, back, and extremities; also, apply sinapisms to the feet and calves of the legs. If these measures fail to produce the desired effect in a few hours, hot rum toddy may be given in connection with them in sufficient quantities to produce the wished-for result. When the reaction is fully established, the patient should be placed upon Belladonna, as in other forms of the fever. Also, give the following antiperiodic :

R Quinine gr. xx.
Baptisin gr. v.
Hydrastin gr. xxi.
White Sugar..... gr. xxx.

Triturate, mix, divide into ten powders, and give one every two hours until all are taken. The onion poultice should be applied to the neck, as in the other forms of the disease ; also, the oil and acid to the surface. The throat should be frequently bathed in a strong solution of Hydrastin and Bayberry, and the diet should be highly stimulating and nutritious.

PERTUSSIS, OR HOOPING COUGH.

The Hooping Cough is usually described as a disease of childhood ; occurring but once in the same individual, usually at some age before puberty, and propagated by specific contagion. It mostly prevails as an epidemic ; hence, a large number of individuals are attacked at about the same time. The diagnosis of Hooping Cough is, a suffocating convulsive cough, returning in regular paroxysms, and terminating in an excretion of thick, glary mucus. The cough is marked by a prolonged stridulous convulsive inspiration, attended by a peculiar tracheal rattle, and followed by short efforts of inspiration in rapid succession. The long Hooping inspiration is almost immediately repeated, and thus the paroxysm continues often for some minutes, until there is a discharge of slippery mucus, either by expectoration or vomiting, when the respiration becomes comparatively easy.

During the paroxysm, the face becomes much injected and red, the eyes suffused, and there is violent spasmodic action of all the muscles of the respiratory organs.

Hooping cough is not unfrequently combined with bronchial inflammation, and in these cases, there is more or less cough between the paroxysms.

The latent stage of the disease, is from eight to fifteen days. The cause of the spasmodic symptoms, is a closure of the glottis. When the disease is unaccompanied by

severe bronchial affections, and is not connected with Pneumonia, Trachietis, or inflammation of the brain, it is seldom attended with danger. When it is thus complicated, each disease should be treated separately.

TREATMENT.

For the primary disease, take of oil of Skunk Cabbage berries, from one to three drops, four or five times a day.

Or,

R Pulv. Alum..... gr. xx.
 Cochineal..... gr. x.
 Syrup of Stillingia..... ʒiss.

Mix, and give one half teaspoonful three or four times a day.

Or,

R Triturated Belladonna gr. xxx.
 “ Sanguinarin gr. xx.
 “ Eupatorin..... gr. xx.

Mix, divide into fifteen powders, and give one three times a day. Once in five or six days, give from ten to fifteen grains of Sulphate of Cinchonin, divided into six parts, and taken at intervals of three hours.

ERYSIPELAS—ST. ANTHONY'S FIRE.

SYMPTOMS.

Shivering, thirst, pain in the back, limbs, and head, loss of strength, restlessness, quick pulse, nausea, and sometimes vomiting. In the course of a few hours, a red spot appears upon some part of the face, which tumefies and spreads rapidly. It may confine itself to the skin, or dip deep into the adjacent areolar and cellular tissues, producing Phlegmonous Erysipelas. There is general fever, a hard and full pulse, and coated tongue. The inflamed parts become of a dark purple appearance, terminating in large and extensive abscess, or in gangrene and death.

This form of the disease often assumes a periodic character, spreading with great rapidity for a few hours, producing dangerous constitutional disturbance, then subsiding for from twelve to twenty-four hours, when it renews its attack with more than former violence.

The prognosis of Erysipelas is always favorable, under Eclectic treatment, with good constitutions.

TREATMENT.

The first thing to be done in the treatment of this disease, is to give a thorough cathartic of Juglandin and Menispermmin.

R Juglandin.....	gr. x.
Menispermmin	gr. x.
Hyociamin	gr. j.
White Sugar.....	gr. xxx.

Triturate, mix, divide into ten powders, and give one every hour, until it operates as a cathartic.

At the same time, the patient should take a vapor bath, and the inflamed part should be thoroughly covered with Collodion. After the operation of the cathartic, the following compound should be given :

R Cinchonin.....	gr. xx.
Quinine.....	gr. x.
Capsicum	gr. x.
Gelsemin.....	gr. j.

Mix, divide into eight powders, and give one every three hours, until all are taken. After which, give from five to ten drops of Muriated Tct. of Iron, every two or three hours. The diet should be nutritious, and the surface frequently sponged with warm lye water. If there is fever, Veratrum or Aconite should be given to control it. The inflamed parts should be constantly protected by repeated use of the Collodion.

PLEURITIS.*

SYMPTOMS.

Acute sthenic pleuritis usually commences with a chill, soon succeeded by an acute lancinating pain in the side, cough, short and quick breathing, and fever.

Each of these will receive particular notice.

The *pain* may come on either before, at the same time, or a short time after the chill. In character it is severe, as if resulting from the thrust of an instrument, and hence it is often called a *stitch* in the side. Usually it is felt somewhere in the mammary region; but sometimes, elsewhere; sometimes near the lower margin of the chest, in which case it is, probably, the result of inflammation of that part of the pleura which covers the diaphragm. In most cases it is confined to one place; but it may be diffused over the surface of the chest, when it is sudden, very sharp and severe.

It is so nearly simulated by the nervous pains in hysteria, that it may lead to error in diagnosis. By inspiration, cough and motion, it is increased. Generally lying on the affected side, and pressure over the intercostal spaces, aggravate it. There is, a day or two after the occurrence of the most severe pain, a greater degree of soreness externally, than when early in the disease the pain is most acute. As the effusion increases, the pain decreases in consequence of the separation of the inflamed membranes by the fluid, and the prevention of friction. It is, in some cases, almost entirely wanting, being perceptible only as soreness on pressure.

The *cough* is usually short and dry, attended with but little expectoration of mucus or frothy matter. Sometimes a more copious expectoration is present. When the

* Newton and Calkins.

pleuritis is complicated with a degree of bronchitis, it is occasionally somewhat bloody. Severe pain often attends it, to avoid which, the patient tries to suppress the cough, and to a certain extent he succeeds by the effort. In some cases, however, this is wanting. When such is the fact, and there is at the same time no pain, the disease, by some authors, is called latent pleurisy.

The *breathing*, in most cases, is more or less difficult. The pain has the effect of preventing a full, deep inspiration. The patient is said to have a catch in his breath. In consequence of this, less air is taken into the lung when the pleura is affected, and the frequency of respiration is therefore increased, inversely, as the quantity of inspired air at each inspiration decreases. The dyspnœa, unlike the pain, increases as the disease advances. The effused fluid filling up the space usually occupied by the lung, causes this symptom.

The function of one lung is more or less suspended, and the action of the other is increased beyond its normal degree, so that the breathing of the patient becomes painful and difficult. This is more particularly the case when the effusion is both sudden and copious. When gradual, the system accustoms itself to the abnormal condition of the respiratory organs. In the latter stage it is most severe.

The *decubitus* has been considered as a pathognomonic sign of the disease. Yet there is much variance among observers in respect to this symptom. This results from the variation of the decubitus in the different stages of pleuritis. At first the patient cannot lie upon the affected side, on account of the increase of pain which that position produces. At a later stage, when the effusion separates the inflamed surfaces, the pain resulting from the position of the two portions of the pleura becomes less, and sometimes is entirely wanting. When the decubitus is on the

sound lung, the weight of the effused fluid, pressing on the mediastinum, and forcing this beyond the median line, preventing the ingress of air into the sound lung, causes pain from dyspnœa. And, consequently, at this period of the disease, the decubitus is most free from unpleasant sensations on the affected side.

The *fever* is usually considerable, and attended with the most common phenomena of febrile affections. The pulse is quick, sometimes rising to over a hundred beats in a minute, hard, full and tense. The skin is dry and hot, particularly over the chest, or the seat of the disease.

The tongue is parched, the urine scanty and high-colored, and occasionally there are cerebral symptoms.

Of the fever there are often daily remissions and exacerbations, the former coming on in the morning, the latter in the afternoon or evening. In four or five days it moderates considerably.

TREATMENT.

In strong and plethoric individuals, where there is a marked case of sthenic pleuritis, the stomach should be thoroughly evacuated by a Lobelia and Boneset emetic, followed by an active cathartic of Jalapin and Cream of Tartar. The affected side should be packed with cold water, and the patient caused to take from five to ten drops of the Tinct. of Veratrum Viride every half hour, until the symptoms of the disease abate. After which, the following compound should be given :

R Aselepin..... gr. xx.
 Gelsemin..... gr. ij.
 White Sugar..... gr. xxx.

Triturate, divide into ten powders, and give one every three hours. The patient should drink freely of some diuretic mucilage, such as marshmallow or flaxseed.

If the case be one of asthenic pleuritis, the emetic and

cathartic should be omitted, and hot packs applied to the side or sides, and the Tinct. of Aconite given to control the inflammatory action, say from one to five drops every one or two hours. Also give the following compound :

R Asclepin.....	gr. xx.
Sanguinarin.....	gr. x.
Quinine.....	gr. x.
White Sugar.....	gr. xxx.

Triturate, mix, divide into ten powders, and give one every two or three hours. If the disease is not subdued, the following compound may be given :

R Eupatorin.....	gr. xx.
Sanguinarin.....	gr. x.
Apocynin.....	gr. x.
White Sugar.....	gr. xxx.

Triturate, mix, divide into ten powders, and give one every three hours. If there should be extensive effusion,

R Syrup of Marshmallow.....	℥iij.
Iodide of Potassium.....	gr. xxx.

Mix, and give one teaspoonful four or five times a day. Where there is much debility, beef tea, wine, porter, in connection with Iron by Hydrogen, should be freely given. The surface should be thoroughly bathed, and the patient caused to remain quiet in bed. If expectoration is difficult, small doses of Lobelia may be given three or four times a day. Where there is a tendency of the disease to assume a chronic form, an irritating plaster should be placed over the seat of the disease, and allowed to remain until a free discharge ensues. The patient's strength should be supported by vegetable tonics and chalybeates.

CHRONIC PLEURITIS.

This disease being so well described by my colleague, Prof. Calkins, in his work on thoracic diseases, I shall offer no apology for transferring it to these pages.

“Chronic Pleuritis,” says Prof. Calkins, “varies greatly, both in severity and duration. It may be *acute*, in respect to the degree of suffering and the rapidity of its progress; it may be *latent* in its character, and slow in the progress of the successive changes attending and consequent upon it. Between these extremes, the intermediate grades of morbid action are almost innumerable. The term *chronic*, then, when applied to pleuritis, seems to be more of a conventional term than in respect to other diseases. In pleuritis, the transition of the *acute* to the *chronic* state is so indefinite, and the symptoms of the recent disease sometimes have so little of an acute character, while that of a long duration occasionally manifests so much greater an intensity of irritation, that the terms, *acute* and *chronic*, would seem to be less applicable to pleuritis than to other diseases. This difficulty arises from the anatomical relations of the pleura. Being a shut sac, its acute inflammation is liable to be made chronic by the retention of inflammatory products; and the chronic is liable to be changed into the acute by the irritation of effused fluids.

“But, notwithstanding these difficulties, there seems to be no impropriety in ascribing to the disease, when highly inflammatory, and until the inflammatory symptoms seem to arrive at an acme, the term *acute*. If, after that period, lingering fever continues, evidently excited by the products of previous inflammatory action, then the term *chronic* may, with as much propriety, be applied to the disease *after*, as *acute* to the disease before the acme. In some cases, however, such an acme seems never to exist;

and to these the name *sub-acute* may with propriety be applied."

Pathology. — The anatomical appearances caused by chronic pleuritis, are very similar to the acute form of the disease. Of course, the influence of time would tend to produce certain modifications.

In general, we find the membranes thicker, often composed of several adherent layers, the earliest deposit being harder than those subsequently formed. The character of the liquid, too, is subject to various changes in the onward progress of the disease. It is less limpid, more prone to become turbid with flocculi of a fibrinous character. In some cases, it even appears in consistence like jelly. The quantity is greater, and consequently, the displacement of adjacent viscera is much more apparent. Here and there, adhesions are often formed between the pleura and lungs, which, in some cases, enclose little sacs of fluid.

Under the best treatment, the disease, when uncomplicated, will generally advance to a favorable termination.

But it often is the case, that the morbid products cannot be absorbed, and, consequently, they remain and pass through a series of pathological changes, sometimes ending in gangrene. Cartilaginous laminæ, bony plates, abscesses, tubercles, and hemorrhagic effusions, are among the successive steps in the progress of chronic pleuritis.

"Sometimes," says Dr. Wood, "the walls of the chest are forced inward contrary to their elasticity, so that, when a puncture is made from without, the air rushes in to supply the vacuity produced by their resilience. In some cases, secretion goes on as rapidly as absorption, and the liquid accumulation remains for a great length of time. This is especially the case in empyema, or collection of pus in the cavity of the pleura. Sometimes the pus makes its way into the substance of the lung, and a fistulous commu-

nication is formed between the bronchi and the pleural cavity through which pus is discharged and air admitted.

“In other instances the liquid takes an external direction, and by means of ulceration escapes into the cellular tissue without the chest, and, travelling occasionally for a considerable distance, produces sub-cutaneous abscesses in various parts of the chest, which ultimately open, unless life is previously worn out. In thus travelling, the pus has been known to occasion caries of the ribs and vertebræ. Sometimes the purulent collection is found to be connected with a tuberculous vomica.”

It is sometimes difficult to determine the causes which change ordinary acute pleuritis into the chronic form. Evidently, in many cases, too much depletion, the too frequent use of mercury, and other articles making up the antiphlogistic regimen, tend to the production of chronic pleuritis. Often, when a case seems to be cured by such means, the impoverished state of the blood, caused by the use of the lancet, thus rendering the system more liable to be affected by low grades of inflammation, develops a new and unwelcome train of symptoms, admonishing the physician that the supposed cure was, after all, delusive.

Dr. Gallup, defining chronic rheumatism, says that it is acute rheumatism half cured. So, it may be said with equal propriety, that chronic pleuritis is the acute variety half cured.

Diagnosis. — The general inflammatory symptoms of acute pleuritis may gradually disappear; but, unless the morbid products of the diseased action are removed from the pleural sac, the fever will recur, and change its type, now very closely resembling hectic, now becoming identical with it. This recurring fever is one of the most troublesome and alarming symptoms of chronic pleuritis; for in other respects the patient does not suffer in proportion to the extent or duration of the effusion.

Dr. Gerhard observes: "I once saw a patient who had performed the full duties of a sailor, going aloft with an enormous pleuritic effusion. When he returned from sea, it amounted to two or three gallons. This is an exceptional case; but it is very common to find patients who can perform many laborious occupations without much inconvenience. This is generally the case if the dyspnœa is not severe; and we find that some patients complain of little difficulty of breathing, with an extent of pectoral disease, which will give rise to great distress in other individuals. The symptoms which so frequently characterize chronic organic diseases, are extremely variable in this variety of pleurisy. These are emaciation, loss of the firmness of the muscles, harshness and dryness of the skin, and slight œdema of the legs. Sometimes they are nearly as well marked as in tuberculous disease of the lungs;—in other cases they are very slight; hence they constitute a diagnostic sign of the disease; and if we find them well characterized, we will do right to regard the case as one probably complicated with tubercles. If our impression be erroneous, we will soon rectify it as the symptoms will gradually become more decided in the latter case, and slowly disappear if the pleurisy be followed by recovery."

The diagnosis of chronic pleuritis, without the aid of the physical signs, is often very difficult.* Its general symptoms simulate those of phthisis. But the physical signs are far more reliable. When these are present, there is no difficulty in ascertaining the true character of the disease. If it is complicated with tuberculous deposition, the case should be regarded with much anxiety: for the diagnosis then becomes much more obscure, and the prognosis more "unfavorable."

* See EMPYEMA.

PROGNOSIS.

The prognosis of this disease depends much upon the extent of the effusion, the condition of the constitution, and the tendency to hereditary disease. Also, upon the skill with which the disease is treated. If the integrity of the constitution is not too much impaired, and there is not a marked tuberculous tendency, under a judicious treatment our prognosis will be favorable.

TREATMENT.

The treatment of this disease depends upon the constitution of the patient. If there is still an inflammatory process going on, Aconite, in connection with Veratrum and Gelsemin, should be used until it is controlled. As for instance, if the skin is hot and dry, the pulse quick, the urine scanty, with more or less dyspnœa, and alternate pyrexia, the following compound may be given :

R Gelsemin.....	gr. j.
Quinine.....	gr. xx.
Asclepin.....	gr. x
White Sugar	gr. xxx.

Mix, triturate, divide into ten powders, and give one every two or three hours until all are taken.

If the symptoms should not subside under this prescription, the irritating plaster should be applied over the entire surface of the affected side, and a thorough spirit-sweat be given ; after which, the following mixture :

R Syrup of Tolu.....	℥iij.
“ Sanguinarin.....	℥ij.
“ Iodide of Iron.....	℥ij.

Mix, dose one teaspoonful every three hours.

If there are febrile symptoms, from one to three drops of the Tct. of Aconite should be given every three hours, in connection with the above mixture.

The diet should be nutritious and stimulating, and if there is much debility, a small quantity of Porter or Scotch Ale should be taken four or five times a day. If there is much effusion, an attempt should be made to produce absorption by the following mixture :

R Syrup of Iodide of Potassium.....	℥j.
“ Apocynin.....	℥ij.
“ Stillingia.....	℥iij.

Mix, dose one teaspoonful three or four times a day. At the same time drink freely three times a day of a tea made of equal parts of Eupatorium, Purpureum and Pipsissewa. If the strength of the patient will bear it, one eighth of a grain of Phytolaccin and five grains of Cream of Tartar should be given.

The irritating plaster should not be removed until a free discharge ensues, which should be maintained by the occasional use of the vegetable caustic, and a constant application of slippery elm poultice. If the absorbents should prove too debilitating to the patient, they should be discontinued for a few days, and the following tonic be given :

R Hydrastin.....	gr. x.
Phosphate of Iron.....	gr. xx.
Prunin	gr. x.
White Sugar.....	gr. xxx.

Mix, triturate, and divide into ten powders, and give one every three hours.

If there are periodical symptoms in connection with debility, and the above prescription should fail to give relief, five drops of the muriated Tct. of Iron, and two grains of Quinine, should be given four times a day. Also a liberal supply of beef tea, prepared as directed in treatment of Typhoid Fever. After recruiting the patient's strength for some days, the diuretics and absorbents should again be resumed, and persisted in for the purpose of pro-

ducing absorption of the effused fluid. If the above treatment should prove unsuccessful, and the Empyema likely to prove disastrous to the patient, the operation of Paracentesis Thoracis should be performed as directed under the head of Empyema.

EMPHYEMA

Is a collection of fluid in some part of the body, particularly in that of the pleura. It consists mostly of a purulent, sero-purulent or serous fluid, within the cavity of the pleura, and is dependent upon chronic pleurisy. When inflammation attacks a serous or diaphanous membrane, it loses its transparency, becoming dull, and in some instances dry. These changes may be observed not only in the Pleura, Pericardium and Peritoneum, but in the arachnoid membrane, in which it is distinct when other traces of inflammation cannot be recognized. At the same time, red vessels appear in isolated spots over a considerable extent. They are arborescent, and consist of minute red lines radiating from star-like points. These vessels, though placed in the substance of the membrane, gradually approach the surface as the process advances. They are not newly developed, but are the colorless capillaries of the sound part, injected with red blood. After existing for a longer or shorter time, these changes are succeeded by others, which are regarded as their effects. The first and most important of these is, the formation of a new fluid at the free and inadherent surface of the membrane.

The nature of the fluid varies according to the stage of the inflammation. In the commencement of the inflammation, the capillaries begin to deposit a semi-transparent fluid, in small quantities, which becomes more abundant as the disease advances. It is straw-colored, of a homoge-

neous character, and, as it is effused, undergoes spontaneous coagulation. This consists in part of the fluid attaining a solid form like a jelly in layers of variable thickness, with a honey-comb surface, and thready filaments coalescing and quite consistent. A small quantity of a thin fluid is found in the interstices of these filaments, oozing from the surface of the coagulated part, and lodging in the most dependent part of the cavity. This process may continue until a large amount of fluid is accumulated, or the entire product of the inflamed surface may be deficient in albumen, producing an extensive accumulation of sero-purulent fluid.

Baillie and other observers state "that this fluid has been supposed to be derived immediately from the blood; but that this is not correct, as it is the serous or watery portion of the morbid exudations, from the surface and interstices of which it may be seen trickling.

The red or brown tint is derived from the blood issuing from the newly-formed capillaries. Shreds of lymph are found floating in it when the accumulation occurs in the pleural cavity. The sero-purulent is often connected with albuminous fluid, from which it is separated during the process of coagulation. It consists mostly of serous fluid, with minute granules of albuminous matter, which precipitate to the bottom, leaving a chalk-like liquid, which constitutes the majority of the effused fluid in the cavity. In this fluid may be seen small particles of lymph afloat. The puriform fluid of serous membranes consists of serous fluid with small granules of opaque matter, not coagulable, and is considered as an abortive effort to produce albuminous exudation. The puriform deposit mostly occurs in the peritoneum. It is a white or cream-colored opaque fluid. It occurs mostly in chronic pleurisy and peritonitis. It has been supposed that genuine purulent matter was not formed unless there had been previous ulceration of the part. But

the researches of Baillie, Black, Hunter, and Millin, have amply shown that purulent fluid may either be secreted by the inflamed membrane, or from the organized layers of lymph, or from both. In the first, the fluid is secreted directly from the capillaries of the inflamed membrane. In the second, it is derived from the organized false membranes which take on the suppurative action. In the third, both sets of vessels are concerned.

SYMPTOMS.

The patient either lies on his back diagonally, or on the diseased side with the head slightly bent forward. The voice is weak, and there is a persistent cough, with more or less expectoration of mucus or muco-purulent matter. The face is buffy, and semi-transparent; the lips tumid and livid. The pulse is habitually quick and small, and febrile attacks are frequent, and often connected with chills. In recent empyema, the diagnosis may be confounded with that of pneumonic solidification. But in empyema, vocal fremitus disappears. In hepatization of the lung, it is maintained, and frequently above the average of health.

In empyema there is no crepitant rhonchus, nor is there true tubular sniffling, metallic respiration; vocal resonance is well or weakly bronchophonic. There is dulness on percussion over the entire pleural sac, and not unfrequently effusion becomes so extensive as to force the lung towards the mediastinum and spine, compressing it in so small a bulk that it appears to be destroyed. Its vessels are crushed together; its bronchial tubes and vessels closed, and the whole organ is rendered unfit for respiration. Unless much care is taken in diagnosis, this condition will be mistaken for atrophy of the lungs. In other cases the heart and mediastinum are carried over to the right side, and the heart will be found beating on the right side of the sternum between the third and fourth ribs.

A case of this kind occurred in my practice, where the effusion, following latent pleuritis, was so extensive that it not only carried the lung forward and backward towards the mediastinum, and against the spine, compressing it so completely, as to prevent the ingress of air; but, the heart and mediastinum were carried forward, and beneath the sternum, so as to encroach materially upon the right lung. In this case, the symptoms at first were those of latent pleuritis, followed by a persistent cough, with expectoration of muco-purulent fluid, great dyspnœa, and inability to lie on the affected side. There was great dullness on percussion, which extended an inch over the right of the sternum.

The only physical signs which were diagnostic of the disease, were the absence of respiratory murmur on the left side, and the deviation of the area of dullness upon percussion; on changing the position of the patient, the dyspnœa and the increased diameter of the left half of the chest, which was three and one-half inches greater than the right. In this case, absorbents, diuretics, and tonics, only gave temporary relief. And in the course of two and one half years, an opening made its appearance in the base of the pleura and diaphragm, where it had previously become attached, and the fluid made its escape into the cavity of the abdomen, producing peritonitis and death. The patient refused to submit to the operation of Paracentesis. Dr. Hughes reports a case of thoracic disease, where the patient became much debilitated, with quick pulse, dyspnœa, and every physical sign of effusion into the right pleura. There was no bulging of the intercostal space; but a flat fluctuating tumor was observed, which dilated upon coughing. A small trochar was introduced, and twenty-four ounces of turbid serum were drawn off. Iodide of Potassium and Sarsaparilla were taken, which afforded partial relief,—yet, he states that he

operated again, in two weeks, and drew off thirty-six ounces more. No inconvenience followed, and the patient appeared much improved. Some two months afterward, the tapping was again repeated, and twelve ounces of fluid were drawn off. In two months more his health appeared good; but there seeming to be an increase of fluid, tapping was again performed, and thirty-six ounces of fluid evacuated. He was tapped again on the eighteenth and twenty-sixth of November successively, which was also again performed on the twenty-first of December. Finding that repetition of the operation must still be continued, the patient learned to perform it himself, and actually did so twice. The prognosis was subsequently favorable, and after fifteen tapplings his restoration was complete.

TREATMENT.

The first efforts of the physician should be to produce absorption, which can be accomplished, in most cases, where the walls of the sac are in a normal condition. But, unfortunately, in many instances the albuminous exudation forms a complete false membrane to the internal walls of the sac, which entirely precludes the action of the absorbents upon the effused fluid. In this event but little can be expected from the use of remedies, until the fluid is evacuated by means of the trochar.

The operation of Paracentesis Thoracis is performed in this manner. The patient should be propped up in bed, and inclined a little to the sound side, so as to separate the ribs, as much as possible, on the diseased side. The skin is to be divided to the extent of one and a half inches, in a direction parallel with the superior edge of the lower rib, on the intercostal space that is selected for the puncture. After dividing the superficial fascia, and any portion of a muscle of the chest that may intervene, as well as the external and internal intercostal muscles, the pleura will

be seen to bulge into the wound. After being distinctly felt by the finger, so as to establish the fact that only fluid is behind it, a trochar, armed with a canula, should be introduced through the sac; the trochar should be withdrawn, and the canula allowed to remain until the fluid is discharged. Or the pleura may be punctured by means of a sharp-pointed bistoury. On making an incision through the integument, the skin should be drawn up from an inch to an inch and a half above the intercostal space intended for the internal opening, so that after the evacuation of fluid, the integument, by passing down over the internal wound, may exclude the air from the pleural cavity, which is one of the most essential conditions to be observed in this operation.

If there is a probability that the fluid may be absorbed, an attempt should be made, by the use of the following :

R Corydalin.....	gr. x.
Phytolaccin.....	gr. ij.
Iodide of Potassium	gr. xxx.
Syrup of Marshmallow.....	℥ij.

Triturate, and mix well together; give from one half to one dram three times a day.

At the same time apply the irritating plaster to the affected side, until a free discharge ensues.

The strength of the patient should be maintained by the use of porter, wine, beef tea, and such articles of food as are easy of digestion. When the above remedy has been used for two or three weeks, a change may be made to the following :

R Quinine.....	gr. xx.
Digitalin.....	gr. ij.
Bitartrate of Potassa.....	℥ij.
Syrup of Stillingia and Syrup of Iodide of Iron	aa ℥ij.

Mix, and give one half teaspoonful three times a day.

The skin should be thoroughly bathed in lye water two or three times a week, and every effort should be made to preserve the patient's strength.

If, after the above treatment, and such other remedies as seem to be indicated, the patient is not materially relieved, tapping should be resorted to at once. In performing this operation, much care is required to prevent the ingress of air into the cavity of the chest. Otherwise empyema would be removed only by substituting emphysema. After the operation, a general diuretic, alterative, and tonic treatment should be pursued, for the purpose of preventing a re-accumulation of the fluid. If empyema is connected with organic disease of the lungs, or general tuberculosis, much relief may be obtained from the operation of Paracentesis. Although it may not effect a cure, still it will very materially assist your constitutional treatment.

PHTHISIS.*

"The essential character of pulmonary consumption consists in the deposit of tubercles in the tissues of the lungs. This deposit may begin with local mischief, or may evidently be the sequel of constitutional disorder. In both varieties the general disease is present, although it may exist in a latent form. Of this the formation of tuberculous matter is a proof. It is evident, however, that the presence of tubercles does not alone constitute the disease. One step back, along the chain of causation, is a morbid condition, of which tubercles are but the effect. This morbid condition, whatever is its nature, may exist a long time before the formation of tubercle begins.

* Newton and Calkins.

That a change takes place in the blood, which causes or precedes the deposit and development of tubercles, is well established. The corpuscles are diminished, and the albumen increased in quantity. The fibrin is below, rather than above the normal amount, and, it may be inferred, that it is also defective in its nature. Elsner, and some other analysts, have found the fatty principles diminished.

Dr. Fricke's analyses indicate an increase above the standard of health, in the lime, and a decrease in the phosphates; while l'Heritier states, that in scrofula the earthy salts are diminished. Hence, the blood may be stated generally to be degraded in quality, and endowed with a low degree of vitality. Whether these be the real changes in the blood is not certainly determined. Physiologists and pathologists are not fully agreed as to the nature of all the changes which the blood undergoes in the scrofulous diathesis. Andral showed that in phthisis pulmonalis, the fibrin was augmented. The probability is, that this increase of fibrin is most frequent, when intercurrent pneumonitis is associated with tubercular disease. To attain to accuracy in this matter is very difficult, on account of the variable state of the blood, arising from exercise, diet, time of the day, and other changing circumstances.

The conclusions to which we may logically come, are the following: 1. That from the earliest invasion, the sum of the vital force is either below the standard of health, or it is relatively low as respects the structure and organization of the individual. 2. That this diminution in the sum of the vital force, is dependent on the imperfect blastema of the diseased blood, causing perversion of the tissues. 3. That as tuberculosis advances, the sum of the vital force for the whole system, continues to diminish. 4. That the nutritive powers of the blood, as respects the nervous tissue, frequently remains undiminished; this

tissue not requiring for its nutrition, compound principles identical with it to be introduced into the blood with the food, and having a nutrition peculiar to itself, differing from that of the cellular and muscular structures. The fatal disease tuberculosis may be traced to a primary error or defect in the blood-making process. Vitiating air, or air stagnating or insufficiently renewed within the chest; and probably other anti-hygienic influences, as a vitiated or defective diet, acting singly, coetaneously, or as respects each other, ancillary, produces slowly under ordinary circumstances, but occasionally with great rapidity, some unknown change in a portion of the proteiniform principle of recently formed liquor sanguinis; this change may consist in hyper-oxydation; but whether so or not, it deteriorates its properties, rendering it, more or less, altogether unsuitable as a material for organization.

At the same time, the oily principle of nutrition circulating with a diminished number of real corpuscles, is in part converted into a fatty substance of a lower degree of oxydation. These modified proteiniform and oleaginous principles are exuded in the blastema, and are either employed in the assimilating processes, deranging the nutrition of the organic structures, and giving the tuberculous or scrofulous character to various pathological processes; or, in the more advanced stages of the morbid process, they are deposited in particular tissues, and accumulate generally in the form of tubercle, but sometimes both as tubercle and morbid fat, substances for the most part incapable of organization.

In the present state of pathological science, confining ourselves to its legitimate object, the study of *phenomena*, apart from any metaphysical views of final causes relative to the *powers* of nature, this appears to be the most accurate definition that can be given of the most essential nature of tuberculosis.—(DR. ANCELL.)

But in what manner does the deposit take place? We possess sufficient evidence that it is derived from the blood; that it transudes from the capillary vessels of the part in which we find it; and that after being deposited, it is liable to undergo certain further changes. On the examination of incipient tubercular deposit, we may always note that there is congestion in the tissues immediately surrounding it. In the pia mater of the sylvian fissure, we see an increased redness, in which a few vessels are more prominent than usual; in the pulmonary parenchyma we may especially, by the use of the microscope, discover the engorgement of the interlobular capillaries investing the air-vesicle into which the tubercle is being secreted. In the mucous membrane of the intestines we see the exquisite arborescent arrangement of the congested vessels, tending from the mesenteric attachment to the point where we observe the deposit, shining through the mucous surface from the submucous tissue, where it has collected. The first elimination of the morbid products acts like a magnetic point of attraction, and generally serves as a centre around which the deposit progressively enlarges by eccentric deposition.

Tubercles exist in various forms; in fine points, grey and yellow granulations, miliary tubercles, and grey or yellow tubercular masses, softened and cretaceous. Each of these modifications requires a more particular notice.

1. *Pulmonary Granulations — Grey Granulations — Miliary Tubercles.*—These various names have been used by authors to describe round, small, translucent, shining, homogeneous bodies, often not larger than a millet-seed, but varying from this to the size of a pea, which appears to be the primitive state of tubercles. Usually they are of a greyish, but often they are of a reddish or of a brownish color, and in some cases they are nearly colorless. Sometimes they are isolated, sometimes clustered in small

bunches, or in aggregate masses. In the latter state they are most often found in the upper portion of the lung. But in the isolated form they are scattered sometimes thickly through the whole or greater portion of the pulmonary tissue; not unfrequently they are found situated beneath the pleura, producing an irregularity perceptible to the touch. This is more often the case in children than adults.

2. *Grey Tubercular Infiltration*.—Laennec defines this as the same kind of matter which forms the granules above described, deposited in the cellular tissue of the lungs in irregular masses, sometimes one, two, or even three inches in cubic dimensions without definite boundaries, or limited only by the extent of the lobules. It is hard, homogeneous, translucent, and of a greyish color, sometimes darkened by the black matter of the lungs, portions of which become enveloped in the masses as they are formed. In some cases no traces of pulmonary tissue can be detected in the masses; in others they present remains of blood-vessels, bronchial tubes, and cellular membrane; and occasionally they are partially penetrated by the air in respiration.

3. *Crude Tubercle and Yellow Tuberculous Infiltration*.—The grey translucent matter constituting the first two deposits above noticed, appears to undergo a gradual conversion into what has usually been considered the proper tuberculous substance. In the miliary granulations, the transformation commences in a small yellowish, white spot, which most commonly appears at or near the centre, and gradually enlarges until the whole granule assumes that character.

In this altered state, the little bodies are now called *crude tubercles*. In the aggregated granules, the change commences at several points, each probably answering to a distinct granule, and considerable masses of yellow opaque

matter result from the extension and ultimate coalescence of these central spots.

The same transformation takes place in the infiltrated translucent matter, beginning in like manner with isolated opaque spots, and spreading until it involves the whole deposit, which, when thus altered, receives the name of *yellow tuberculous infiltration*. This may be distinguished from the crude tubercle by an irregular and angular, instead of roundish form, and by a less regular line of division between it and the pulmonary tissue. There is no doubt that both the crude tubercle and yellow infiltration are often originally deposited in this state, without the preliminary formation of the translucent matter.

The next important change in tubercle is that of softening. This, in many authors, is said to begin in the centre, and to gradually advance to the circumference. Concerning the truth of this, there is, however, some doubt. The reasons as given by Mr. Carswell upon which such a doubt is based, are the following:—Tubercular matter, according to his theory, is contained in the air-cells and bronchi. If, therefore, this morbid product is confined to the surface of either, or has accumulated to such a degree as to leave only a limited central portion of their cavities unoccupied, it is obvious that when they are divided transversely, the following appearances will be observed:—1. A bronchial tube will resemble a tubercle having a central depression, or soft central point, in consequence of the centre of the bronchus not being, or never having been occupied by the tuberculous matter, and of its containing at the same time a small quantity of mucus or other secreted fluids:—2. The air-cells will exhibit a number of similar appearances, or rings of tuberculous matter joined together, and containing in their centres a quantity of the same kind of fluids. When the bronchi or air-cells are completely filled with tuberculous matter, no such appearances as those we have

just described are observed, and hence the reason why tubercle, in such circumstances, has been said to be still in a state of crudity, or in that state which is believed to precede the softening process.

As the softening process advances, the whole tubercle becomes converted into a soft, pultaceous, yellowish mass, in appearance resembling pus. The infiltrated mass, likewise, undergoes a similar change. Sometimes the entire tuberculous deposit seems throughout its whole mass, to become suddenly softened, and, in this manner, large portions of the lung are quickly destroyed. The pressure of the growing tubercle upon the circumjacent lung, at first makes it less vascular; but reaction at length takes place, inflammation succeeds, and congestion, ulceration and suppuration follow. In some cases the tubercular disease passes through its various stages without giving rise to marked inflammation. In the majority of cases, however, the bronchi, air-cells and cellular tissue, are more or less affected by the inflammatory process. The succeeding ulceration gives rise to the formation of cavities. Frequently one large vomica is made up of several smaller ones, which, in the parietes of the large cavity, make excavations of irregular shape, now winding and now crossed by bands of tissue. The size of the cavity varies from that of a pea to that of an orange. Its contents consist of a mixture of pus and bloody matter, and portions of pulmonary tissue. Sometimes they are inodorous, sometimes fetid. In children the vomicae are less common than in adults. As the disease advances, a false membrane begins to form around the decaying tubercle, at first thin and delicate, and in appearance resembling mucous membrance. Large abscesses are sometimes seen, between which and the bronchi there is no communication.

Cicatrization of Tuberculous Cavities. — That this is not a very rare occurrence, Laennec proved in his early

researches into the termination of tuberculous disease. Indeed, from this we learn that phthisis sometimes terminates favorably. This happens when the deposit is limited in extent.

But, sometimes at the apex of the lung, we find an old adhesion, sometimes a crust of fibro-cartilaginous deposit, or even a fibrous band passing from the lung to the ribs. Adjacent to this pathological change, the lung is puckered and drawn inward. To the touch, it feels firm and consolidated; to the eye, it appears dark, from an abundant deposit of black pigment. On making an incision, we find a cavity lined by grey fibrous membrane, semi-transparent, or thick, whitish, and fibro-cartilaginous, or soft and pliable, like the mucous membrane.

[In the winter of 1855, my colleague, Prof. Hollemback, and myself, made a post-mortem examination of a female, who had been laboring under phthisis for the last twelve years. In her case the right lung had been entirely destroyed, save a very small portion, just below bifurcation of the bronchi, which was completely injected with tuberculous matter. This portion was about the size of a hen's egg, and completely impervious to air. A fibrous band passed from this bunch to the lower portion of the pulmonary cavity, and was attached to the pleura costalis. The cavity was filled with scro-purulent fluid; but the woman had enjoyed a respite from the urgent symptoms of the disease, save periodical attacks of dyspnœa, in one of which she died.—*The Author.*]

Adhesions are almost always present in phthisis. In 112 cases examined by Louis, there was only one in which no adhesion was found. To some extent, their location corresponds to that of tubercles. In rare cases, the entire surface of the lung is bound down to the costal pleura, and to that of the diaphragm. These have the effect to prevent pneumothorax. The trachea and bronchial tubes

often are the seat of extensive lesion. Those are most often affected which form a way of exit to vomicae. Their posterior, more often than their anterior, internal surfaces are affected. The larynx and epiglottis, are sometimes the location of tuberculous disease. Among other lesions attending phthisis, are partial emphysema of the lung, dilatation of the bronchi, and enlargement of the bronchial glands. This latter effect is most common in children.

Appearances in other parts of the body. — The origin of tubercles being in the blood, their distribution throughout the entire system is a necessary result. But according to Louis, this general law is established, that when tuberculous deposit exists in other organs, it always exists in the lungs. The converse of this, is far from being true; and the law itself is occasionally subject to exceptions, the occurrence of which is most frequent in children. Without the lungs, the tuberculous depositions are most often composed of the yellow opaque tubercle. Grey granulations or miliary tubercles, have also been observed in various parts of the body. From some form of tubercle, scarcely an organ of the body is wholly exempt. They are found in the liver, intestines, mesentery, prostate gland, testicles, heart, bladder, uterus, spleen, and kidneys, and in the membranes and substances of the brain. It was the conclusion of Louis, that, of all the cases of tubercles, occurring in persons over the age of fifteen years, one-third had them in the small intestines, one fourth in the mesenteric glands, one-ninth in the large intestines, one-tenth in the cervical glands, one-twelfth in the lumbar glands, and one-fourteenth in the spleen. The stomach becomes larger than natural, more thin, and is subject to chronic inflammation of its mucous surface. The glands of Peyer — those near the cæcum — become the seat of tubercles. The mucous glands of the small intestines, sometimes ulcerate, causing perforation, and the admission

of the faecal secretions into the cavities of the peritoneum. A similar diseased state of the large intestines sometimes occurs. The mesenteric glands are very much enlarged. In the brain, tubercular deposition gives rise to hydrocephalus.

GENERAL SYMPTOMS AND COURSE OF PHTHISIS.

Since the discovery of the physical signs by Laennec, the tendency of some minds has been to disregard the general symptoms in the formation of a diagnosis. Among such, an unnecessary delay is often caused in the application of remedial agents; for the general symptoms very frequently are the first indications of approaching disease. A diagnosis should not then be wholly dependent upon the physical signs in the first stage; for these are seldom manifest, until the disease has so far progressed as to make a prognosis unfavorable. Certain general symptoms are grouped together, and said to be indicative of the *scrofulous diathesis*, or *tuberculous cachexia*. What this condition of the system is, or what its influence, in the development of phthisis, it may be difficult to accurately ascertain; and yet the description of some of its more important symptoms, may be of utility in detecting that first pathological change in which phthisis begins.

Among the more important symptoms are, a pale, pasty appearance of the countenance, large upper lip and alæ-nasi. In persons of dark complexion, the skin is sallow; in those of fair complexion it is unnaturally white, resembling blanched wax rather than a healthy countenance. The veins are large and conspicuous, the pupils of the eyes are large, eyelashes long, with a fair, florid complexion. In persons of a bilious temperament the skin is coarse, its color dingy. The form of the body is often destitute of symmetry. The trunk is small, the head large, abdomen tumid, limbs unshapely, the growth of the body is irregular,

the functions of nutrition are feeble and deranged. The intellect is often very active; there is great sensibility to impressions and acuteness of mind.

Stages. — For convenience in description, phthisis has been divided into three stages. Between these no line of demarkation is accurately drawn. The first stage begins with the onset of the disease, and ends when the softening of the tubercle has commenced.

General Symptoms. — The pulse is accelerated, especially after eating, towards evening, or by slight exercise. A burning sensation is felt in the palms of the hands and soles of the feet. Towards evening a slight chilliness comes on; towards morning, perspiration supervenes. The febrile paroxysm is sometimes very slight, scarcely attracting notice; sometimes severe, causing unpleasant sensations, and exciting alarm. Sleep ceases to refresh, food to give strength and vigor. The aspect of the patient changes; the countenance is pale, expressive of languor, or red with the hectic flush. The skin is less elastic; the muscles less firm; menstruation is tardy or entirely wanting; emaciation becomes evident. If these symptoms have appeared in the spring-time, by the use of proper remedies, and regimen, they are almost entirely removed, until the returning autumn and winter bring them on with increasing severity. Occasionally they seem to arise from bronchitis, pleuritis, pneumonitis, or some febrile disease. When they succeed to measles or scarlet fever, they frequently progress with unbounded rapidity. The *rational symptoms* are subject to much variation. In most cases, however, a short, dry cough is one of the first symptoms that excites alarm. Often very slight, a mere hacking in the morning, it steadily increases, and at length is accompanied with a frothy expectoration of transparent mucus, and afterwards of yellow, opaque matter. Slight dyspnœa occurs when the patient exercises. About the sides and

shoulders there are fugitive pains. Slight hemorrhage from the lungs occurs; at times it may be somewhat copious, but often in small quantity. As the disease progresses, the cough increases, preventing sleep, and sometimes occurring in paroxysms. The expectoration is correspondingly increased, becoming thicker, more yellowish, or greenish and purulent. The other symptoms usually advance with equal pace. Sometimes the disease is very insidious in its approach. Suddenly, without any premonition, a violent attack of hæmoptysis occurs, immediately succeeded by all the appearances of confirmed phthisis. These rational symptoms are intimately connected with the tubercular deposition. The tubercles are in a state of cruddity. Softening has not yet commenced. They are in the form of small, roundish, homogeneous bodies, collected in clusters, or more widely disseminated through the lungs in the form of miliary tubercles. Sometimes they are more or less firm, of a greyish color, or translucent.

Physical Signs. — In the nascent state of phthisis, we cannot derive positive information from physical exploration. In order to produce abnormal sounds on percussion and auscultation, the deposit of tubercles must be considerable; or there must be in some one part of the lungs, be it ever so limited, a deposit sufficiently great to interfere with the pulmonary functions.

If the tubercles are small and scattered, the physical signs will not be so sure to detect the morbid changes. If, on the contrary, they are large and clustered together, abnormal sounds are more readily developed; so that it is evident that the physical signs cannot determine the accurate amount of tuberculous deposition; since the arrangement of tubercles, as well as their number, has a modifying influence. Shall we therefore conclude that the physical signs are of no practical utility? As well might we deny the usefulness of the telescope, because it does not

reveal all the minute phenomena of the heavens. Because no one of the physical signs is absolutely pathognomic, we should not conclude that their evidence, added to that afforded by the general symptoms, is not of great value. These signs, found at the point most subject to tubercular disease, the comparative rarity of any other lesions capable of producing the same physical phenomena, enable us to arrive at a degree of probability which is almost equivalent to certainty. The existence of the twofold evidence given by the general symptoms and the physical signs, makes the diagnosis far more sure than it could be when founded only on one class of symptoms.

Inspection is often a valuable means of diagnosis. Prominence of the clavicles, contraction of the intercostal spaces, a flatness of the chest in front, an unequal height of the shoulders, a depression of the ribs,—all these, when present in a tuberculous patient, indicate the presence of phthisis.

Percussion is usually somewhat dull under the clavicles. An inequality in its degree on opposite sides of the chest, and at points equally distant from the median line, adds much more significance to this physical sign, and especially if the dulness is greater on the left side. In emphysema and pneumo-thorax a similar inequality of sound may exist.

In these instances the diseased side is most sonorous; but the respiration is most feeble where the resonance is greatest, a circumstance which distinguishes this condition from phthisis. An emphysematous condition of the lung occurring adjacent to the location of solidification from tubercles, may cause the percussion to remain nearly normal. Were this coincidence common, it would certainly diminish the value of percussion in diagnosis. But it is of very rare occurrence. The signs derived from percussion should be sought about the clavicular and acromial regions.

Obscurity of resonance being detected beneath one or both clavicles, or at any point of the chest near to the apices of the lungs, what conclusion should be formed as to the nature of the disease? To this question Chomel replies:—"Obscurity of sound, and feeble respiration under one of the clavicles, give strong reason to suppose the existence of tubercles, for partial effusions take place in the immense majority of cases at the inferior and posterior parts of the chest, and it is almost never that chronic pneumonia is primitive and without the presence of tubercles.

In the early stage, the slightest difference of note or pitch on opposite sides of the chest, if confined to the clavicular and acromial regions, should excite suspicion. Although the dulness may be confined to a small locality over the top of the shoulders and the scaleni muscles, yet if it be clearly perceptible it is a very sure indication of the existence of phthisis.

Auscultation, in the first stage, reveals a feebleness of respiratory murmur in the sub-clavicular region. This occurs where percussion is dull, and at the same time the resonance of the voice is greater than normal. While in one part of the lung these signs are heard, in another the respiration is *blowing*. A slight difference of sound in relative situations on both sides, does not necessarily indicate phthisis. The anatomical relations of the lungs have a modifying effect. A sound in the right lung of a phthisical patient should not be considered as indicative of tubercles, unless it is decidedly blowing. But if the respiration is more blowing at the apex of the left than at that of the right lung, there can be but little doubt that tuberculous disease is present. With the advance of the disease, the respiration becomes somewhat rough, or even bronchial, with a prolongation of the expiratory sound, which is one of the most striking characteristics of tuber-

culous deposition. Inspiration is at times somewhat jerking. The cardiac pulsations are more audible than usual. Bronchial respiration and bronchophony are heard out of their natural locality, thus becoming indications of pulmonary lesions.

Second Stage of phthisis may be considered as beginning with the softening of tubercles, and terminating when cavities are fully formed, and all the physical effects arising from them fully developed. In other words, it is the forming stage of vomicae.

General Symptoms. — Of the general symptoms collectively, I remark that they are more severe. The evening chills are more constant and troublesome; the succeeding heat is more intense and more general, the morning sweats more regular and copious. Hectic is more constant, and, to use the words of another, “hangs out upon the cheek the red flag of death;” the pulse is more frequent, the respiration quick and laborious, even when the patient is at rest. Languor and weakness increase, emaciation is rapid, the muscles are soft and flabby, and the patient can no longer endure his wonted amount of physical or mental exertion. Paleness of the countenance frequently remains through the early part of the day. Sometimes there is a greater tendency to chills shown by an increased sensibility to cold, and the evening exacerbation brings on an increased heat of the palms of the hands and the soles of the feet. The countenance, under the influence of the morbid excitement, is for a while more animated, the eye brightens, and the red blush of hectic gives to the features new beauty and loveliness. When speaking, the lips of the patient slightly quiver, there is breathlessness which interrupts him in the middle of a sentence. Sleep is more disturbed. Not unfrequently the mind, even in this stage of the disease, is buoyant and hopeful. The least or most temporary amendment in his symptoms, or the delusive

promises and boasts of quacks, inspire him with the joy of hope. *The Physical Signs* in this stage are more marked. As the disease advances, the tubercles soften and become diluted with a morbid secretion from the pulmonary tissues. Particles of curdy or cheesy matter pass from their locality, in the parenchyma of the lungs, into the bronchial tubes, and are expectorated. The exit of this matter from the lungs gives rise to little vacuities called caverns, cavities, vomicæ or excavations. A careful examination of the chest, at this time, affords positive evidence of the internal mischief. The upper parts are less freely raised during respiration than in the healthy state; this phenomenon frequently being more evident on one side than on the other. The sub-clavicular regions on both sides, give a dull sound on percussion. To the mind, the ear, or stethoscope, when applied to those portions of the chest situated where percussion is dull, reveals a slight crackling noise—the crepitating rhonchus.

After vomicæ are formed, the cavernous rale or the gurgling is heard, when the cavity is partly filled with liquid. Resonance of the voice and cough, and at length pectoriloquy follow. If a solidified portion of lung, enclosing a considerable bronchus, comes near to the surface of the chest, then bronchial breathing and bronchophony are heard. Percussion, too, will give the same sound, whether the lung be hepatized or blocked up by tubercular matter. This condition of the lungs may be present in one part, while cavities exist in another, and therefore, different parts of the chest will exhibit different physical signs; I have said that the gurgling sound is heard in case the vomicæ contains liquid. But does this sound necessarily prove in all cases the existence of cavities? Dr. Watson remarks, “that where we hear, during inspiration, the gurgling rale—called by Laennec, gargouillement—we may conclude, that there exists a cavity. But the

cavity will not necessarily be a vomica. In ninety-nine cases out of a hundred, it will be so; but in the hundredth, perhaps it will not."

Dilatation of the bronchi, sometimes produces a considerable globular expansion. In case these cavities, formed by such an expansion, were filled with a liquid, the same sound would be produced, as that caused by tubercular vomicæ.

Third Stage. — The third stage is that period, which commences when cavities are *already formed*, and continues until the termination of the disease. This has been called the colliquative stage, from the copious perspiration, the frequent attacks of diarrhæa, and the abundant expectoration with which it is attended. The feet and ankles become œdematous; the vital powers gradually decrease, one after another; the functions of life fail; the body, by a *facilis descensus*, falls to the earth, and the soul rises to eternity.

General Symptoms. — The most important of these are, the colliquative sweat, diarrhæa, extreme emaciation, anasarcaous swelling of the lower limbs, and high febrile excitement. A sure indication of approaching dissolution, is an aphthous condition of the mouth. This usually comes on during the last weeks, or days of existence. The mental faculties, at this period of phthisis, are more or less deranged. Reason remains; but it is not the reason of health. Slight delirium sometimes occurs; the patient becomes indifferent to what is passing around him, and to his own state, when a little while before his attention was aroused by every unfavorable symptom.

Special Symptoms. — The expectoration is very copious, consisting of a heterogeneous mass of mucus, pus, softened and occasionally solid tubercle, blood, shreds of lymph, rarely portions of pulmonary tissue, sometimes very fetid. The cough and dyspnœa increase. The

shoulders are raised and brought forward; the chest is narrow and flat. During respiration, the clavicular regions are less moveable than natural, and when the patient attempts to make a full inspiration, the upper part of the thorax, instead of expanding with the appearance of spontaneous ease, peculiar to the healthy state of the lungs, seems to be forcibly dragged up at each respiratory effort.

Physical Signs.—The physical signs in the third stage, are similar to those in the second. The gurgling rale, the increased resonance of voice, bronchophony, and pectoriloquy, amphoric resonance, and metallic tinkling, may be present in different cases and at different times. Some of these signs are more frequently heard than others. The metallic tinkling is oftener present in a large than in a small cavity; and since large cavities are formed in the third stage, this symptom is observed only when the disease is far advanced.

Hæmoptysis.—This is the most important rational symptom that occurs in phthisis. In other diseases and conditions of the lungs, it is so rare that it very certainly indicates the nature of the case. Hæmoptysis, to be sure, may be produced by other causes—by certain forms of heart disease, by cancer, by cirrhosis of the lungs; and, in females, by vicarious menstruation. But these latter conditions of the lungs are very rare, and therefore hæmoptysis should be considered a strong evidence of phthisis.

Emaciation.—This is one of the cardinal symptoms of phthisis. Frequently it precedes the other symptoms. Between the ages of forty and fifty, Dr. James Clark found it one of the earliest symptoms of this disease. Indigestion is regarded by the patient and his friends as one of the principal causes of this atrophy. It is frequently associated with anæmia. There is many times a peculiar physiognomy; the cheek is pale and thin, and the eye bright.

Every organ in the body, except the liver and the heart, even the blood itself, emaciates. And this is often the first symptom noticed. At length slight disturbance is manifest — a little dyspnœa, a little chilliness towards evening, and a tendency to cough. This symptom, emaciation, is not always progressive. The patient may gain flesh, but he soon loses it again; then perhaps gains awhile in weight; and so on alternately. This, however, is observable: he seldom gains as much as he loses. There is a gradual though not a continuous descent. It is true also, that while there is an increase of weight, the tubercular disease advances; and while the patient and friends are elated with hope by the apparent amendment, a fatal termination steadily approaches. Loss of appetite and diarrhœa very much increase the emaciation.

Diarrhœa. — The rapidity of the progress of consumption very much depends upon this. With the number of evacuations Louis found that the loss of strength corresponded. This fact should militate against the employment of cathartics in phthisis. "A tablespoonful of castor oil," says Dr. James Clark, "I have seen throw a phthisical patient into an alarming state of debility." In those who have in health a costive state of the bowels, incipient phthisis produces regularity of action. Diarrhœa is usually confined to the advanced stage of the disease. In one-eighth of the cases treated by Louis, diarrhœa commenced with the disease, and continued until its termination; in the majority it occurred in the later stages; in others during the last days of life; and in four out of one hundred and twelve cases, it never appeared. The distress attending this symptom is often severe; before each evacuation the pain is often intense, and immediately after it there is a deadly sensation of sinking. It has an effect upon the cough and expectoration.

The severity of these symptoms is usually in an inverse

ratio to that of the diarrhæa. As a diagnostic sign it is not of great value. The nature of the disease is known by other means, before this becomes fully developed. The cause of the diarrhæa is the softening of the tuberculous matter deposited among the coats of the intestines. After death we find ulceration of the mucous membrane, tuberculous deposits thickening and softening, and enlarged mucous follicles, especially near the termination of the ileum and in the colon.

Œdema. — This is an invariable attendant of the last stage of phthisis. In young delicate females it may supervene in the earlier stages. Generally it shows itself first in the lower extremities, and is confined to them. In the morning there is sometimes an œdematous appearance in the face. For the diagnosis this is of no value; but it is a prognostic of approaching death. Is the suppression of the menses the cause of the tuberculous disease? Some have thought it might lead to tubercles in the lungs. The menstrual suppression is for the most part the effect of that general debility, that deficiency of the nutritive properties of the blood which precedes the deposition of tubercles. If this theory is true, then the treatment, instead of being wholly directed to the restoration of the uterine functions, should be directed to remedy that deficient nutrition and its consequent debility, which cause the menstrual suppression, and the tuberculous deposition. The cessation of the menses is sometimes one of the first, if not the first, prominent symptom of phthisis; and a careful examination of the case will often discover this to be the fact. Attendant upon this symptom there are, in most cases, a slight cough, a little chilliness and fever, and some of the physical signs of incipient phthisis. In general this function continues, but decreases in quantity, during the early stage of the disease. From a great variety of causes, this

function is so liable to derangement, that as a diagnostic sign it is not of much value.

Duration of Phthisis. — Tuberculous phthisis is essentially a chronic disease, the range of its duration being considerable. Cases have been recorded which have terminated in eleven days, while others have lingered for twenty or even forty years. These, however, are extreme cases; the majority terminate in one or two years, the average duration being eighteen months.

Phthisis in Infancy and Childhood. — Phthisis is more common in infancy and childhood than was once supposed. Dr. Guersent, one of the physicians to the Hospital des Enfants Malades, an institution appropriated to the treatment of patients between the age of one and sixteen years, gives, as the result of his observations, that five-sixths of those who die in that hospital are more or less tuberculous. Early in life, its existence is manifested by symptoms somewhat different from those of adults. The cough occurs in paroxysms; hectic expectoration and hemorrhage from the lungs are not so apparent. The tuberculous cachexia, rapid pulse and breathing, emaciation and derangement of the digestive organs, tumid abdomen and irregular action of the bowels, at one time constipated, at another affected with diarrhæa, and the pale unnatural color of the evacuations, point out the nature of the disease. In children the mesenteric glands are more subject to disease than in adults. But the most frequent seat of tuberculous affections is the bronchial glands, and the next in frequency is the lungs. The relative frequency of tubercles in the bronchial glands of children, compared with the lungs, is not less than five to four, which is reversed after the age of puberty.

CAUSES OF PHTHISIS.

Among the causes of phthisis, hereditary predisposition occupies the most important place. And yet this hereditary tendency explains nothing in relation to the real cause of the disease. It is the name of a fact, not a cause, which is sure to produce specific results. We must, therefore, in order to arrive at anything definite or practical, seek to find that in which the fact has its origin—whether it is a peculiar state of the blood, or a want of functional power,—in the digestive organs, or in the respiratory apparatus. Vitality is the effect of so many conditional causes, each liable to vary in intensity, and by that variation to influence the result—the degree of vitality,—that it is difficult to tell in what ultimate change phthisis has its origin. But the nearer we can ascend to the sources of knowledge, the more general and conditional that obtained knowledge becomes, for all other knowledge relates to it as species to genera. Accordingly, it is evident that if chemistry or optics could detect that condition of the blood, whatever it is, which is most prevalent in the progeny of tuberculous parents, before deposition of tuberculous matter takes place, a general fact would be obtained of more value than many particulars often spoken of by medical writers. From pathology or from chemistry we gain no evidence that those who are predisposed to phthisis have blood essentially differing from that of others. And the existence of the hereditary tendency has been questioned by some recent observers. But because of the non-appearance of an abnormal change in the constituents of the blood, except in rare cases, or because the existence of that tendency is denied, we should not therefore conclude that hereditary influence does not exist. It may exist, but not as an ultimate cause, ever producing a certain result.

Occupations of Life.—Concerning the causes of phthisis,

Lombard, of Geneva, has given us some valuable statistical information. The result of his researches is thus stated :— The circumstances which increase the tendency to phthisis are poverty, sedentary habits, violent exercise of the chest, an habitually bent position of the body, impure air in workshops, the inhalation of certain mineral and vegetable vapors, or air loaded with a coarse or impalpable dust, or with light, thready, elastic substances.

The conditions which seem to exert a favorable preservative influence, are easy circumstances, an active life in the open air, regular general exercise, the inhalation of watery vapor, and animal and vegetable emanations. Sedentary habits are prone to produce phthisis. The habit of sitting with the body inclined forward, thus preventing the free expansion of the lungs, and the action of the stomach, and other abdominal viscera, is one cause of the injurious tendency of a studious life. Among shoemakers and tailors, the proportion of phthisical patients is very large.

Dyspepsia. — In dyspeptic diseases, many authors have placed one prominent cause of phthisis ; and with good reason they have done so. For since tubercles depend for their development upon a want of nutrition in the blood, and since dyspeptic diseases deprive the blood of its nutritive properties, there is every reason to believe, that in this source tubercles have their origin.

There are other causes of phthisis, seldom described in medical works. Of these, one is masturbation, which, by its debilitating effects upon the general constitution, tends in an eminent degree to favor the development of tubercles. Another cause is the use of such remedial agents in the cure of disease, as leave after their primary effects have subsided, secondary ones, which in the end prove worse than the original disease. If this be so, and the history of thousands of individuals corroborates its truth, then

why may not its action upon the system directly induce tuberculous disease? Indirectly, if not directly, by debilitating the system deteriorating the red blood, and inducing emaciation, it so influences the mass of the fluids, as to predispose the system to the ingress of phthisis; it leaves the territory unguarded by any vital force, even by that mysterious one, "*the vis medicatrix naturæ*." A patient, somewhat predisposed to phthisis, takes a severe cold in the autumn. Febrile symptoms supervene. There is, according to the opinion of some, an exalted condition of vital action; and consequently, all the instruments of the antiphlogistic regimen and treatment, are immediately used to subdue the inflammation. After a number of weeks, the patient may slowly recover. But his digestive organs do not seem to be healthy. Strength does not return; a slight cough begins, and in from six months to a year, phthisical symptoms are fully developed. Such cases often occur, and so often, that the more judicious physicians of all creeds, even those standing on the conservative platform, now begin to abandon the use of depressing remedies; not because as some often pretend, diseases are now so different in their nature, as not to require the same treatment, but because the application of science to the study of medicine, has exploded the idea that it is necessary to hazard life, by the use of deleterious agents, in order to produce a speedy and complete cure.

Prognosis.—In those cases where the disease is far advanced, the prognosis is always very unfavorable. So small is the chance of recovery, that the physician has no good reason to encourage either patient or friends.

But morbid anatomy has demonstrated, that even in the last stages, recoveries do take place; the cavities are filled with chalky concretions, their parietes contract, and cicatrices are produced. What else than the cure of phthisis do such facts teach? On this subject, Dr. Swett remarks,

"I never shall entirely despair of the life of a patient, when I recollect what I once witnessed in this Hospital. A patient was admitted with phthisis. The disease was perfectly well characterized, and in its most advanced stage; a large and well-marked abscess existed under the right clavicle. Indeed the signs of this lesion were so distinct, that I was in the habit of calling the attention, of students in attendance, to them, as perfect in their character. On one occasion, as I approached the bed for this purpose, I found the patient, who had been gradually sinking, in such a state that it seemed to me improper to disturb him. He was bolstered up in bed, with his head falling upon his shoulder, breathing with great difficulty, bathed in perspiration, and with a rapid and feeble pulse. The next day my attendance ceased, and after two months was again commenced. On entering the ward, the house physician called my attention to a man, dressed, and walking about the ward, apparently stout and well, although somewhat pale. To my great astonishment, it was the patient I had left two months before, apparently dying." The same author testifies that he has known a number of cases of patients, who have had all the evidences of phthisis, and yet have recovered.

TREATMENT.

"The indications to be fulfilled in the treatment of this disease," says Prof. Calkins in his very excellent work on thoracic diseases, "are, first, to prevent the further deposition and development of tubercles; and, secondly, to prevent and to protect, as far as possible, the lungs and other organs from their injurious results. The means both prophylactic and remedial, which can be of any utility for this purpose, must be directed to the attainment of this result: the production of that state of the solids and fluids which is most adverse to the development of tubercles." Prof.

J. G. Jones says: "The leading indications to be fulfilled in the treatment of this disease are twofold, to wit: 1. To change the condition of the blood, and restore the qualities pertaining to its healthy state. 2. To prevent the further deposition and development of tubercles, give tone and vigor to the whole system, and in a measure change its diathesis." Profs. Newton and Powel, in a work on the treatment of diseases, make the following remarks: "In the treatment of this disease, little else can be done than to make use of means which will enrich the fibrinous portions of the blood, strengthen the nervous and muscular system of the patient, and relieve troublesome and dangerous symptoms as they may appear." Dr. Walshe gives the results which he obtained in the Consumption Hospital as follows: "1. Of a given mass of patients entering the hospital in all stages of the disease, and in every variety of general condition—between the actual moribund state and that of but slight constitutional suffering—the number leaving it, on the one hand, *improved* or *unadvanced* was more than double that, on the other hand, leaving it in a worse state or dying within its walls (the exact ratio is 67·84 : 32·16). If the cases in which death was actually imminent at the period of admission, were excluded, the result would be very materially more favorable than this. 2. In 4·26 per cent. of the cases, complete restoration to health, not only as regards apparent disturbance of the functions generally, but as regards local evidence of actual pulmonary disease, was effected. 3. Complete removal of symptoms was more frequently effected in the male than in the female; but, on the other hand, the results were on the whole slightly more favorable in the latter than in the former sex. 4. All patients who grew worse while they were in the hospital had reached the stage of excavation on admission; and all patients whose tubercles were yet unsoftened on admission, left the hospital either improved,

or having had a *statu quo* condition kept up. Improvement is more probable than the reverse, even where excavation exists on admission. 5. In a given mass of cases, the chances of favorable influence from sojourn in the hospital will be greater in a certain (undetermined) ratio as the duration of the disease previous to admission has been greater; in other terms, natural tendency to a slow course is a more important element of success in the treatment of the disease, than the fact of that treatment having been undertaken at an early period. 6. The mean length of stay in the hospital, in the most favorable class of cases, nearly doubled that in the least favorable. 7. The chances of benefit are most in favor of those whose trades are pursued out of doors (wholly or partially) than of those who work wholly within doors. 8. The results did not appear to be influenced by the laborious or non-laborious character of the trade individuals might have pursued. 9. The age of the sufferers did not appear to exercise any very material influence on the character of the results. 10. Patients coming from the country have, on an average, a slightly stronger chance of improvement than the residents of London and its suburbs. 11. Patients admitted during the warmer half of the year, benefit by a sojourn at Brompton, to a slight extent, more than those received during the six colder months."

From the above facts, together with the experience of every intelligent Eclectic physician, it appears that pulmonary consumption is occasionally cured, and sometimes terminates favorably without medical aid; and perhaps I might state, in spite of medicinal treatment. But when we consider the irrational treatment which has been relied upon for the cure of this disease, we can hardly be surprised at its fatality. Nor that not only the medical fraternity, but the community generally, have been led to believe that it is incurable. So much so is this the case, that

a large number of physicians deem it a sufficient apology for losing a patient in the prime of life, to state that he died of pulmonary consumption. I do not expect in this article to lay down a course of treatment that will always cure, irrespective of age, condition of the patient, and stage of the disease; but, I do expect to explain such a course, as will, if properly applied, cure a large proportion, and materially relieve such as cannot be entirely restored.

When a person exhibits premonitory symptoms of phthisis, every exciting cause of the disease should be removed. The patient should exercise freely in the open air, and be placed upon a full and nutritious diet, such as beef-steak rare cooked, &c. He should also take a reasonable quantity of some stimulant, as brandy toddy, or some malt liquors, before each meal. If this does not remove those early symptoms, chalybeates, in connection with sugar, may be given as follows :

R Precipitated Carbonate of Iron..... ℥ij.
White Sugar..... ℥vij.

Mix and triturate, take one teaspoonful three or four times a day. Should the beef, and other articles of food, not be well digested, on account of a dyspeptic habit which frequently precedes this disease, slightly cooked eggs and rich animal soups may take their place. This course has been efficient in my hands in a large number of cases, where the early symptoms of phthisis were developed. But where the disease is farther advanced, with more or less anemia, cough and expectoration, with depression beneath the clavicle, feeble respiratory murmur, and dulness on percussion, and especially if there is connected with this a tubercular diathesis, then much effort will be required to prevent a disastrous encroachment of the disease. In this condition and stage of symptoms, the following treatment should be instituted.

A large double flannel cloth, within which has been quilted a liberal quantity of coarse salt, should be placed over the chest and back in such a manner as to protect both the anterior and posterior portions of both lungs. This salt pack should be changed from time to time, but should be worn until the disease is removed. And for supplying those deficiencies of the blood, which are such a prolific cause of pulmonary consumption, give the following compound :

R The white of eggs.....	xij.
Iron by Hydrogen.....	gr. xx.
Phosphate of Lime.....	ʒij.
Chloride of Sodium.....	ʒij.

Mix with one pint of best brandy, one pound of sugar, and one pint of water ; dose one tablespoonful three or four times a day. In connection with this, the patient should exercise freely in the open air, and should make a liberal use of warm or cold baths, as the case may seem to indicate. If there are chills,

R Quinine	gr. xx.
Phosphate of Iron.....	gr. x.
Morphine	gr. jss.
White Sugar.....	gr. xxx.

Mix, triturate, divide into fifteen powders, and take one every three hours. If the first fifteen powders fail to interrupt the chills, they should be repeated from time to time, until they cease entirely. If there is troublesome cough, with dyspnœa, give the following mixture :

R Simple Syrup of Stillingia.....	ʒij.
Syrup of Tolu.....	ʒij.
Morphine.....	gr. ij.

Mix ; dose, one teaspoonful three times a day, and oftener if required. If there appears to be bronchial irritation, from one-eighth to one-half a grain of Gelsemin should be taken at bed-time. If the salt pack should be removed

at any time during the treatment, the chest should be well protected by oil silk or flannel. In nearly all cases of pulmonary consumption, there is a deficiency of the natural covering, the hair. In fact, so general is this the case, that I have come to regard a deficiency of hair on the chest as one of the indications of a tuberculous diathesis. For the hair is not simply an ornament, but it serves to separate certain proportions of carbon, silica, sulphur and other materials from the blood. As the disease advances to the latter part of the second stage, other symptoms make their appearance, as diarrhæa, and a muco-purulent matter or pus, constituting the sputa, indicating a breaking down of the tuberculous deposit, with more or less affection of the glands of the bowels. To control the diarrhæa, no medicine is more effectual than the following :

℞ Sub-nitrate of Bismuth..... gr. xx.
 Quinine.. gr. xvj.
 Pulverized Gum Arabic..... gr. xxx.

Mix, triturate, divide into twenty powders, and give one every five or six hours until that symptom is controlled.

The method of treating this disease by introducing medicine into the system by inhalation, having received much attention of late, I will quote the remarks of Dr. Turnbull upon the subject, as they appear to embrace most of the facts essential to it.

“ Dr. Snow has shown, in a paper on the inhalation of various medicinal substances, that some must be inhaled by the aid of heat, such as opium, morphia, extract of stramonium, and the gum resins ; others with heated vapor, such as iodine, camphor and creosote, and a third class of substances, such as hydrocyanic acid, ammonia and chlorine, at the ordinary temperature. Mead, in his day, recommended fumigations with the balsams in phthisical cases,

and Dr. A. T. Thomson (*Cyclopedia of Medicine, Art. Expectorants*) has stated that he has seen much benefit derived from them, when inhaled in spasmodic asthma, in shortening the paroxysm, and promoting expectoration. Dr. Snow found that ammoniacum gives off a fragrant, rather pungent odor, which can be inhaled very well by most persons. He also found inhalation of the watery extract of opium serviceable in relieving the cough; but that morphia was the most pleasant and suitable preparation of opium for inhalation. Extract of stramonium afforded more or less relief in five or six cases of asthma.

He tried iodine in eighteen cases of consumption at Brompton Hospital; in ten of them it was continued for more than a month; and the conclusion to which he came, was that no benefit could be observed to follow its use. Oil of turpentine appeared to relieve the cough in a few cases, and likewise camphor. He used the volatile alkali in the quantity of one minim, diluted with nine of spirit; the cough was usually relieved, and in two or three cases the breathing also. It would seem, therefore, from its volatility at the ordinary temperature, to be a remedy peculiarly suitable for inhalation, if it could be obtained more easily. Dr. Snow also found great relief in a few cases of bronchitis with difficult expectoration, from inhaling ammonia, twenty drops of the strong solution being mixed with two ounces of water in a Woulfe's bottle. Chlorine has been used for inhalation; it was introduced for this purpose in France, and there is good reason to believe that it has proved of material service in cases of chronic bronchitis, and even in some of phthisis.

With reference to its use in this latter disease, Dr. James Clark has observed, "We have tried it in many instances, and it has in several, apparently suspended the progress of the disease." He also states that it relieved dyspnoea and cough in some cases, though in the majority

it procured no amelioration. Dr. A. T. Thomson has likewise stated, that in cases of asthma, the relief it produced was very striking, and that in phthisis, he had observed the hectic symptoms abate.

Of the various remedies now mentioned, it is probable that gum resins and balsams, camphor, conia, and chlorine, are the most suitable and useful for inhalation; but it does not appear that by inhalation of opium, or morphia, very decided advantage has been gained over the ordinary mode of exhibiting them.

The vapor of tar was formerly recommended for inhalation, and few medicines have been more used for this purpose than creosote. Sir Alexander Crichton, in 1823, strongly recommended tar vapor in consumption; but Dr. Forbes, in a report of cases in which he had tried it, published in the Medical and Physical Journal, stated that he found it injurious in this disease, though of service in some cases of chronic bronchitis. He appears, however, to have used it in cases so far advanced, that no benefit could reasonably have been expected from its employment. Creosote has now superseded the use of tar vapor, which does not, from its irritating properties, seem well suited for inhalation, though there can be very little doubt, when we consider the healing power it has in external application, that it must exert a similar effect upon the lungs, if it could be used in such a form as to obtain its beneficial influence apart from its irritating properties. Creosote is perhaps more generally used by the profession for the purpose of inhalation, than any other remedy; and I believe that when sufficiently diluted with vapor of water, it is one of the most useful. I have found that it has a sedative influence, relieving cough and promoting expectoration, whilst it at the same time not unfrequently lessens the quantity of this secretion, both in consumption and bronchitis. I have already observed

that the pyrogenic bodies act upon the mucous and cutaneous surfaces; and my attention has been directed to other bodies of this class, by the fact that many of them have remarkable healing properties, when applied to ulcers and chronic cutaneous eruptions, a fact which leads me to expect that this class of bodies may, when fully investigated, furnish a suitable remedy for promoting the healing of pulmonary ulcers, and thus supply the desideratum to which I have previously alluded. Many of the pyrogenic bodies possess such healing properties in cutaneous diseases, in a greater or less degree. From my own experience, I know that ointments, made with tar, creosote, spirit of tar, juniper tar oil, and naphthaline, have such properties, and are valuable remedies in the treatment of skin diseases.

The inference drawn from these facts, has led me to use for inhalation, some other pyrogenic bodies, viz: spirits of tar, juniper tar oil, Persian naphtha, and enpione. The spirit of tar possesses the healing virtues of tar without its irritating effects; so much so, that I think it might advantageously supersede the crude substance as an external remedy. It is more readily volatilized than creosote; and when inhaled, it produces generally a mild, stimulating, and often rather a soothing effect upon the lungs. In some instances, however, it has appeared to increase the cough and expectoration, and it is not, therefore, suited for bronchitis, until inflammatory action has been subdued completely; or for cases of consumption, until progress has been made in arresting the disease. Without wishing to speak confidently of the remedy, I may state that it has appeared useful in some cases of the latter disease, in conjunction with other treatment. Juniper tar oil (*oleum codinum*), which is a valuable remedy in skin diseases, and much used on the Continent, is less volatile than spirits of tar, and is less irritating when

inhaled. Persian naphtha and eupione possess decided anæsthetic properties; the former, when inhaled along with the vapor of water, has in some instances relieved difficulty of breathing in a very remarkable and decided manner; and this fact renders it worthy of trial in spasmodic asthma. Eupione has decided sedative properties: it has relieved cough and difficult breathing, and patients have slept well after using it; but it is not a pleasant remedy to inhale, and it has not unfrequently produced sickness afterwards, so that I should not recommend it to be used for this purpose.

I have used several of the essential oils for the purpose of inhalation. Many of them possess decidedly anti-spasmodic properties, and I have found that they have a remarkably strong power over difficulty of breathing, a property which renders them peculiarly suitable for relieving spasmodic asthma. The oil should be dissolved in spirit, and inhaled with the vapor of water, so as to dilute its stimulating properties. The oils of cubebs and copaiva, which are hydro-carbons, are mild in their action, and produce very little stimulating effect. The oxygenated oils which I have used appeared to be more stimulating in their action on the air-tubes, and some of them have stronger anti-spasmodic and expectorant properties. The oils of anise and peppermint are very stimulating, and in general cause too much irritation. Oil of spearmint is milder and antispasmodic, relieving difficulty of breathing in asthma, and even in phthisis. Oil of fennel is also mild. The oil of origanum is moderately stimulating and expectorant. I have also used the oils of rosemary and pimento, which have similar properties. The hydruret of benzyle, which is the oil of bitter almonds deprived of its prussic acid, is very irritating and much too stimulating for inhalation. Chloroform is a remedy which has been much used by some medical men for the purpose of inha-

lation, not only in asthma, but, in a small quantity, in consumption, in order to relieve irritable cough. In some cases I have dissolved the essential oils in chloroform, and used them in this way for inhalation, their volatility being thus so much increased that they may be given on a handkerchief, as chloroform is usually administered.

In addition to the remedies spoken of by Dr. Turnbull, Carbonate of Ammonia, Nitrate of Silver, Sanguinaria and Veratrum Viride have been quite extensively used by different physicians, and in some cases to much advantage. The oil of Erigeron, spoken of by Dr. Turnbull, I have used quite successfully in several cases of hæmoptysis, connected with phthisis, but whether it acts more efficiently in this way than when introduced into the stomach, I am not prepared to say. If the inhalation of medicine be resorted to, the introduction of medicine into the stomach should not be neglected. We can readily conceive how ineffectual a treatment exclusively by inhalation must prove, since the well established pathology of this disease shows the local affection of the lungs to be only one of the unhealthy products of the constitution. In this stage of the disease, much benefit will be derived from the use of diuretics to relieve the blood from the excess of uric, and other acids, with which it becomes overcharged, and also of the disintegrated tissue which accumulates in the system, owing to imperfect respiration. Among the best diuretics to accomplish this object is the following :

R Pipsisewa	℥j.
Indian Hemp	℥jss.
Marshmallow	℥j.

Bruise all together, and make one quart of syrup with white sugar, and add one half pint of best gin, and let the patient take from one half to one wine glass full four or five times a day.

For the purpose of procuring rest at night,

R Quinine.....	gr. x.
Scutellarin	gr. xv.
Gelsemin.....	gr. ij.
Iron by Hydrogen.....	gr. xij.

Mix, divide into ten powders, and give one every night at bed-time.

Where there is great emaciation and debility in this stage, for supplying material for combustion, and for increasing the quality and quantity of blood :

R Cod Liver Oil.....	Oj.
Good Brandy.....	Oss.
Chloride of Sodium.....	℥ij.
Phosphate of Iron.....	℥jss.

Mix, and shake well before using. Dose, one tablespoonful three or four times a day. If there is much bronchial irritation in connection with tuberculous affection,

R Syrup of Stillingia.....	℥ij.
Tct. of Veratrum Viride.....	℥ss.

Mix, and give thirty drops three or four times a day.

For the purpose of promoting absorption of the already existing tuberculous deposit, Prof. John Fonday, Emeritus Prof. of Theory and Practice of Medicine in the Eclectic Medical College of Pennsylvania, who has had great experience in the treatment of this class of diseases, places much reliance on the use of electricity.

In his treatise upon this subject, p. 68, he thus remarks : " The electro-magnetic machine constitutes one of the most powerful means that we possess, to accomplish the results so desirable in the treatment of this disease. What we want in the remedies which we employ, is some power that will excite the contractility of the coats of the vessels, of the enlarged absorbent glands, as well as of the lymphatic vessels ; give strength to the magnetic organization of the

part, and promote the absorption of the deposits that may have occurred in and around these glands and vessels.”

Dr. Cartwright, of New Orleans, who has published several very interesting articles upon the nature and treatment of tuberculous affections of the lungs, cites quite a number of cases where absorption of the tuberculous deposition was effected by the inhalation of the vapor of sugar.

I have generally obtained the most satisfactory results in promoting the absorption of tuberculous deposits by the use of Iodide of Potassium, in connection with mucilage. The mucilage prevents the irritating effects of the Iodide of Potassium on the bowels. The chest should be thoroughly bathed twice a day with a liniment made as follows :

R Oil of Stillingia ʒj.
 White of three eggs.
 Oil of Turpentine ʒij.
 Chloride of Sodium ʒij.

Mix, and shake well together. During the entire treatment of this disease, the strictest attention should be given to bathing, diet, and exercise in the open air. Every means should be resorted to which has a tendency to improve the general health of the patient. Where the disease assumes a periodic character, the greatest benefit will be derived from administering a liberal quantity of Quinine and Iron every seven or eight days. When the disease is complicated with other local difficulties, such as leucorrhœa, spermatorrhœa, &c., they should receive especial attention.

HÆMOPTYSIS.

By hæmoptysis we understand expectoration of blood. It may occur from the mucous surface of the bronchial tubes ; by extravasation of blood into the pulmonary tissue, &c., or from the corrosion of a blood-vessel on the wall of a tuber-

culous vomica. It is also said to occur from the granulated surfaces in phthisis. The most common cause of the disease in females, when it occurs from the mucous surface of the bronchi, is vicarious menstruation, which takes place about the period of the catamenia. In these cases, for some time previous to the attack, there will be observed a diminution in the catamenial flow, accompanied by anæmia. Indeed, we have reason to suspect that, in connection with the catamenial derangement, there is tuberculous affection of the lungs. I do not recollect, out of a large number of cases, a single exception, and in quite a number of cases, it has terminated in acute phthisis. When the blood escapes from the bronchial mucous surface, it may be detected by the bubbling liquid rhonchus in the bronchi. The discharge is generally preceded by more or less constitutional disturbance, such as constipated bowels, furred tongue, and cough, which is often persistent, and accompanied with great dyspnœa. Where it occurs from the rupture of corroded blood-vessels, the premonitory symptoms are quite obscure, and the discharge of blood is very sudden, with violent cough and dyspnœa. The physical sign is the mucous *râle*. When it occurs from the granulated surface of the pulmonary tissue, or from pulmonary apoplexy, a correct diagnosis of the case may be made from its previous history, together with the rational and physical signs. The general symptoms of hæmoptysis are dulness, cold extremities, followed by flushes of heat, and red cheeks. The discharge from the lungs is attended with dyspnœa, pain, and oppression of the præcordia, a sense of rawness in the throat, and a sweetish taste in the mouth. The expectoration consists of bright, frothy, or black and clotted blood, sometimes mixed with mucus. Says *Laennec*: "When the hemorrhage is very great, it comes on with a moderate degree of cough, and is accompanied with a convulsive elevation of the diaphragm

like that which takes place in vomiting. Auscultation furnishes us with two signs of pulmonary apoplexy, absence of the natural respiratory sound over a circumscribed space and crepitant *râle* around this space.

TREATMENT.

Where this disease is dependent upon derangement of the catamenia, the feet should be placed in warm water, and hot sinapisms applied to the back and lower portions of the bowels, and from five to ten grains of pulverized matico given every fifteen or twenty minutes until the hemorrhage ceases. Or, put one drachm of the oil of Erigeron in a pint bottle, fill it with hot water, and cause the patient to inhale the vapor. Either of these remedies will arrest the hemorrhage. Or, in the absence of other remedies, a teaspoonful of a strong solution of salt and water taken every five or ten minutes, will frequently prove effectual. As soon as this symptom is removed, the patient should be put upon a treatment as directed under the head of irregularities of the catamenia. Where hemorrhage occurs from the rupture of large vessels, ligatures should be applied to the legs and arms, and the patient caused to inhale a strong vapor of the oil of Erigeron, and at the same time from five to ten grains of the matico should be given every fifteen or twenty minutes, until it is arrested. During the active hemorrhage, the ligatures should be so adjusted as to retain the main volume of blood in the extremities, which should only be allowed to return by degrees after the bleeding has ceased.

As this form of hæmoptysis is always connected with phthisis, the patient should be treated accordingly. If it arises from pulmonary apoplexy, the ligatures should be used as in the other case. A hot sinapism should also be applied to the chest, and the surface should be thoroughly bathed in hot whiskey and capsicum, for the purpose of

diverting the blood from the deep capillaries of the lungs to the superficial capillaries. Also, administer the matico with small doses of Lobelia and capsicum every fifteen or twenty minutes. The bowels should be moved by a stimulating injection, and the patient allowed to hold ice in his mouth.

As soon as the hemorrhage ceases, the circulation should be controlled by the use of Aconite. As this form of hæmoptysis is connected not only with phthisis, but also with pneumonia and scurvy, the primary cause of the affection should be treated according to the nature of the case, and the condition of the patient.

BRONCHITIS.

Inflammation of the mucous membrane of the bronchi is one of the most common forms of pulmonary disease. It may be either acute or chronic. In the acute form, coryza, sore throat, hoarseness, and slight rigors, are the first symptoms. There is also lassitude with more or less pain in the limbs. As the disease advances there is a sensation of heat and soreness or rawness of the bronchial surface, accompanied by pain on coughing, and oppressed breathing. There is a persistent cough, with an expectoration of frothy mucus of a saline taste. In a more severe form of the disease, the small capillary tubes, as well as those of a medium and large size, are implicated. In this form of the disease the pulse is extremely frequent; there is great dyspnœa, a cyanotic appearance of the countenance, coldness of the body, difficult respiration, and a marked tendency to asphyxia. In these cases the vital powers rapidly become exhausted, and unless relieved by timely treatment, delirium with fatal coma terminates the patient's existence.

Physical Signs.—In certain cases slight dulness on percussion will be detected. In protracted cases, a considerable amount of dulness may be observed at the base of the lung, owing to the gravitation of the excreted fluid. On auscultating the chest, the respiratory murmur will be found weakened, and in some instances entirely suppressed. There is sonorous, sibilant, and mucous rhonchus in various combinations. The sonorous and sibilant rhonchus is most marked in the early stage of the disease; the mucous in the second. But both are frequently combined in the second stage. In capillary bronchitis, in addition to the above signs, there is sub-crepitant rhonchus at both bases, posteriorly, with a fine mucous râle higher up. If the fine mucous râle is predominant, it most positively indicates inflammation of the capillary bronchial tubes.

TREATMENT.

The surface should be thoroughly bathed in hot lye water, and the patient placed in bed with a warming poultice applied over each lung. From five to ten drops of the Tinct. of Veratrum Viride should be given every half hour until the active symptoms of the disease disappear. As soon as this occurs—

R Quinine.....	gr. xv.
Gelsemin	gr. jss.
Iron by Hydrogen	gr. x.
Pulverized Acacia	gr. xx.

Mix, and triturate; divide into eight powders, and give one every two hours. After which, if there are any lingering symptoms, small doses of the Tinct. of Aconite should be given. To relieve the cough, if any should remain, the acetic Syrup of Sanguinaria should be used as indicated. The patient's strength may be maintained by the use of chalybeates, vegetable tonics, and a nutritious diet.

CHRONIC BRONCHITIS.

This, like other forms of chronic inflammation, frequently succeeds the acute form, although it may occur in a slow and insidious manner, without being preceded by an acute form of the disease.

It attacks individuals of all ages ; but is most frequently met with in the aged, and those who are much exposed to the inhalation of dust. When the disease succeeds to acute bronchitis, the febrile symptoms disappear ; but the pulse still remains frequent, and the cough and difficulty of breathing prove persistent, although these symptoms are materially relieved by free expectoration. There are still nightly exacerbations, and irregular sleep. The expectoration is copious, opaque, and in some instances, puriform. Night sweats are frequent, occasioning great debility. If the disease should not be relieved, the cough will become croupy, the expectoration more copious, the dyspnoea increases, there is diarrhæa, and death soon follows.

Physical Signs.—These are sub-crepitant, mucous, sibilant, and sonorous rales. It is said by Laennec, that we frequently have all the sounds in chronic bronchitis quickly following each other, which he calls, “*cantus omnium avium*” (the song of all the birds). If the disease is mostly confined to the extreme ramifications of the bronchi, the sub-crepitant rale will be predominant ; if the larger tubes, the sibilant. If the larger tubes are the seat of the disease, the sonorous rale will indicate it.

TREATMENT.

In the early stage of chronic bronchitis :

℞ Compound Syrup of Stillingia..... Oss.
Iodide of Potassa ʒj.

Mix, and take one teaspoonful every five or six hours. A salt pack should be applied to the chest, and occasionally moistened with equal parts of the Tinct. of Iodine and Aconite. If there are night sweats, and periodical exacerbations :

R Quinine	gr. xx.
Iron by Hydrogen	gr. x.
Cream of Tartar	gr. xxx.

Mix, triturate, divide into eight powders, and give one every four or five hours. If there is much debility, a liberal use should be made of porter, ale, or brandy, together with a nutritious animal diet. Where there is much irritation of the upper part of the bronchi, benefit is sometimes derived from the use of astringent gargles. Also by inhaling the vapor of Aconite or Lobelia.

If the cough is troublesome at night, a small dose of Lupulinc, Morphine, and Prunin, may be taken at bedtime. When the disease assumes a tuberculous character, it should be treated as in phthisis.

EMPHYSEMA.

This term applies to air in the cellular tissue, all portions of which are liable to the affection. The sub-cutaneous is the most so; but all the prolongations of this tissue through the body communicate with it by the areolar structure. Thus the air when effused into the cellular tissue may pervade nearly every tissue of the body.

There are three ways by which air may make its ingress into the cellular tissue. 1. By a wound of the integument. This is termed traumatic emphysema. 2. By the development of gas within its cells. 3. By a fistulous opening through the lung, communicating with the pleural cavity.

The diagnosis of emphysema is seldom difficult. As when air accumulates in the cavity of the pleura, it will readily be distinguished from empyema, by the resonance on percussion. And when it accumulates in the cellular tissue, the swelling is uniform and light, and yields a peculiar crepitant sound upon pressure, caused by the removal of the air from one cell to the other.

The prognosis will depend upon the cause of the emphysema and the state of the respiratory organs.

TREATMENT.

In the treatment of this disease the object should be to arrest its progress by preventing a further accumulation of air in the cellular tissue, and to remove that already accumulated. In spontaneous emphysema the only effectual method of arresting the disease is to correct the morbid state of the system, which gives rise to it. When it proceeds from asthenic and typhoid disease, Quinine and Iron with a liberal diet will generally arrest its progress. By scarification, the air, which has previously accumulated, will make its escape. In emphysema arising from wounds, by enlarging the wound so as to give free exit to the air, the difficulty may be relieved. Where it occurs as the effect of a fistulous opening into the pleura, the inhalation of the vapor of nitrate of silver, together with astringents, will generally effect a cure. If there is tuberculous affection of the lungs, it should be treated as directed under that head.

NEPHRITIS, OR INFLAMMATION OF THE KIDNEYS.

SYMPTOMS.

There is an acute pain in the region of the kidneys, with some fever, and a dull pain in the thigh of the affected side. The urine is at first clear, but soon becomes of a

dark red color. The patient feels great uneasiness when he attempts to walk or sit upright. He lies easiest on the affected side. The pulse is, at first, hard and full, but in the course of a few days, it becomes small, weak, and quick. The skin is hot, and the tongue covered with a dark brown coat.

TREATMENT.

Apply hot wet packs over the region of the kidneys, and give freely of the syrup of Marshmallow, Cliver tea, &c. Also, give the following compound :

R Sweet Spirits of Nitre	℥j
Tinct. of Aconite	gutt. xxx.
Gelsemium	℥ii.

Mix, and give fifteen drops every two or three hours as the case may indicate. If the disease should prove obstinate, a mild alterative of Euonymine should be given at bedtime, and Digitalis and Cream of Tartar should be substituted for the Aconite and Gelsemium. The patient should keep quiet, and in bed, and the diet should be of a light vegetable character.

CYSTITIS, OR INFLAMMATION OF THE
BLADDER.

Inflammation of the bladder very much resembles that of the kidneys in its symptoms. But there may be acute pain and tension at the lower part of the bowels, and difficulty of urinating, with constant inclination to do so, and also to go to stool.

TREATMENT.

The bowels should be thoroughly evacuated by Jalapin and Neutralizing mixture. The patient should be placed in bed, and hot packs should be applied over the region of the bladder. The bladder should be injected with a

luke-warm mucilage of slippery elm, and the patient caused to drink of Marshmallow, flaxseed, slippery elm, &c. If the inflammation is not thus controlled, give the following compound :

R Pulverized Acacia	gr. xx.
Soft Water	℥ii.
Sweet Spirits of Nitre	℥ss.
Tinct. Veratrum Viride	gutt. xx.

Mix, give one half teaspoonful every half hour until the symptoms are controlled. Continue the mucilage until the patient is completely free from the disease.

HEPATITIS, OR INFLAMMATION OF THE LIVER.

SYMPTOMS.

The diagnostic symptoms of this disease are tension of the right side, under the false ribs, attended with fever, difficulty of breathing, anorexia, thirst, and a pale and yellow appearance of the skin and eyes. When the inflammation is extensive, the pulse becomes quick and hard, and sometimes irregular. The patient is troubled with a dry, hacking cough, and a constipated condition of the bowels ; although, in the latter stage of the disease, and in warm climates, there is sometimes a diarrhæa with bilious vomiting, great tenderness in the hypochondrium, and dulness on percussion.

TREATMENT.

A hot sinapism should be placed over the region of the liver. The surface should be bathed in warm lye water, and the following compound be given :

R Euonymin	gr. xx.
Sanguinarin	gr. x.
Bitartrate of Potassa	gr. xxx.

Triturate, mix; divide into ten powders, and give one every three hours. At the same time, if there is fever, give from ten to twenty drops of the Tinct. of Gelseminum so often as to maintain a gentle moisture of the skin.

When the sinapism has produced irritation of the surface, it should be removed and hot packs applied instead. If the disease should still prove persistent, the following compound must be substituted for the first :

℞ Muriate of Ammonia gr. xx.
 Irisin gr. x.
 Gelsemin gr. j.

Triturate, mix, divide into ten powders, and give one every two hours until all are taken, or until the disease is removed. If the disease should assume a chronic form, a pill of the extract of Dandelion and Capsicum should be given two or three times a day. If the bowels should become constipated from a deficient secretion of bile, give the following compound :

℞ Syrup of Boneset..... Oss.
 Common Salt..... ℥i.
 Sulphur gr. xxx.

Mix, and give one teaspoonful three times a day, and let the diet be free and nutritious.

ASTHMA.

SYMPTOMS.*

The symptoms indicating asthma are various. Some of them are premonitory, and, by those who are accustomed to the affection, are understood as warnings of an approaching attack. Among these are loss of appetite, flatulence, eructation, languor, irritability, drowsiness, oppression and chilliness. Perhaps he retires at night with a sense of uncomfortableness.

* Calkins.

It is very common for an attack actually to commence sometime after midnight, or about 2 or 3 o'clock in the morning, and the general signs are much like the following :

Often the person is aroused from sleep by a feeling of constriction across his chest, or inability properly to expand it. He raises himself in bed, and sits bowing forward, perhaps with his elbows resting on his knees, drawn up before him. His breathing is labored, and attended with a wheezing noise, often so loud as to be audible in another apartment, or at a distance.

He asks for more air to be admitted into the room, and makes a strong voluntary effort to expand his chest in inspiration, and to contract it in expiration ; or, if able, he rises from his bed, and hastens to a door or window, at which, however cold the weather, he often long remains. The labor of respiration gives warmth to his body, and he often perspires freely. His extremities, however, are liable to become cold, and his countenance is generally distressed, pale and haggard, though sometimes it is red and turgid. Often the pulse is small, feeble and irregular, though sometimes it is scarcely disturbed. Sometimes the heart palpitates, and flatulency becomes troublesome ; the urine becomes copious and pale, and even the fæces are passed with the impatient hurry of spasmodic action. The speech of the sufferer is interrupted and difficult, and there is a propensity to cough, which he sometimes favors with the hope of forcing away the impediment to his breathing.*

TREATMENT.

In the treatment of this disease, the first thing to be attained is the relief of the excessive dyspnœa. For this purpose, give the following mixture :

* Calkins on Thoracic Diseases.

R Tinct. of Gelseminum..... ℥j.
 “ Lobelia ℥ss.

Mix, and give fifteen or twenty drops every ten or fifteen minutes, till the paroxysm passes off. After which, give the following compound :

R Quinine..... ℥ij.
 Cornine ℥iij.
 Compound Syrup of Stillingia..... Oj.
 Phosphate of Lime..... ℥j.

Mix, and give from one half to one teaspoonful three times a day, during the interval between the paroxysms of dyspnœa. Whenever the paroxysms return, the Gelseminum and Lobelia should be repeated. But as soon as relief is obtained, the alterative and antiperiodic should be resumed. Other medicines, such as Chalybeates and vegetable tonics, if required to maintain the integrity of the constitution, should be given. The above course, if persisted in, will seldom fail to remove this very troublesome disease.

CHOLERA MORBUS.

Cholera Morbus is a violent purging and vomiting, with griping, sickness, and a constant desire to go to stool.

It is occasioned by a redundancy of bile, by the fermentation of food on the stomach, such as cucumbers, melons, sweet-meats, cherries, and all unripe fruit. Also exposure to damp night atmosphere.

SYMPTOMS.

It is generally preceded by Cardialgia, sour stomach, flatulency, and pain in the bowels. As the disease advances, the pulse becomes very feeble, and the surface cold and clammy. The urine is scanty, and there is almost constant vomiting and purging.

TREATMENT.

R Neutralizing Mixture..... ʒij.

Tinct. of Prickly Ash Berries..... ʒj.

Mix, and give from 30 to 60 drops every fifteen or twenty minutes, till the vomiting and purging cease. Apply a hot sinapism over the region of the stomach and bowels, and place jugs of hot water about the patient. If the use of the above mixture for a proper time does not afford relief, give the following :

R Pulverized Camphor..... gr. x.

“ Capsicum..... gr. xv.

Oil of Peppermint..... gutt. iij.

Morphine gr. j.

Triturate, mix, divide into ten powders, and give one every half hour. At the same time, give the patient freely of rice coffee, made by scorching the rice and preparing it as common coffee. If the disease assumes a periodic character, some of the antiperiodic compounds should be given for the purpose of interrupting its periodicity. After the vomiting and purging cease, mild alteratives should be given, as Euonymine, Hydrastin, &c. The diet should consist of rice, dropped eggs, broiled beef, &c. The patient should avoid exposure to the sun, and violent exercise, until completely recovered.

CHOLERA, EPIDEMIC OR CHOLERA ASPHYXIA.

This disease began to excite general attention in 1817. It commenced in Bengal in India, from which place it has scarcely been absent since. In 1818 it passed on to the Coromandel coast, and in the same year to Malabar, the Burmese Empire, Sumatra and Ceylon. In 1820 it spread

to China, and successively throughout the larger portion of Eastern Asia, and to the islands of the Mediterranean, to Arabia, Mesopotamia and Syria. In 1821 and in 1822 to Persia. In 1831 it appeared in Prussia and in Austria. In June of the same year it appeared in St. Petersburg, in October at Hamburg and London. On the eighth of June, 1832, it first made its appearance on the American Continent in Quebec, and in a few days at Montreal. On the 24th of June in New York, on the 3d of July in Albany, on the 5th of July in Philadelphia, on the 30th of September in Cincinnati, from whence it spread to Madison, Louisville, St. Louis, Maysville, Wheeling, and made its way to most of the important towns in the United States.

It reappeared in America in 1848, where it has prevailed as an epidemic or in a sporadic form ever since. Its fearful ravages and well-known fatality, have elicited on the part of the medical profession, the most anxious inquiries, in regard to its cause and *pathology*.

SYMPTOMS.

Malignant cholera, like most other epidemic diseases, presents a great diversity of symptoms. Its attack is usually violent and sudden, but mostly preceded by certain premonitory symptoms, such as a furred tongue, diarrhæa, with a complete loss of the digestive powers, and sometimes with headache and ringing in the ears. After these symptoms have continued for a longer or shorter time, the patient is attacked with violent Cardialgia or heart-burn, soon followed by nausea and vomiting, with a profuse colliquative diarrhæa. The discharges from the stomach and bowels resemble rice water. These symptoms are soon followed by great weakness and sense of exhaustion.

The powers of locomotion are speedily arrested, and

spasms affecting the whole of the muscles of voluntary motion, but particularly those of the arms and legs, come on. The pulse becomes small, weak, and accelerated, the respiration labored, the tongue flat, white, and moist. These symptoms are soon followed by a sense of pain, and burning heat in the stomach, and great desire for cold drinks. The skin becomes cold, corrugated, and covered with a clammy sweat. The lips, limbs, and at times the entire body, have a peculiar livid hue.

The pulse decreases until it is no longer felt at the wrist, the respiration is slow and feeble, the breath is cold, the eyes are sunken, and surrounded by a livid circle. At this stage there is no secretion of the bile and urine, and the vomiting, purging, and spasms abate. The powers of the mind seem unimpaired, for the patient continues to answer questions freely; but he frequently expires in this stage suddenly and without a struggle.

The limits of this work will not permit me to enter into the details of the different varieties of this disease; but suffice it to say, it often runs an entire course to a fatal termination, without vomiting or cramp, but characterized by the peculiar diarrhæa. Again the diarrhæa may be absent, and the vomiting be the principal symptom. The rice water evacuations, together with the excessive prostration, are sufficient to distinguish it from cholera morbus.

TREATMENT.

The indications to be fulfilled in the treatment of Cholera, are to arrest the diarrhæa and vomiting, and to produce reaction, or to equalize the circulation, by inducing the blood from the deep-seated, to the superficial capillary vessels. For the purpose of arresting the vomiting and diarrhæa, small doses of Camphor, Capsicum, and Morphine, should be given every ten or fifteen minutes, in a small quantity of Neutralizing Mixture: say,

℞ Pulv. Camphor..... gr. v.
 Capsicum gr. x.
 Morphine gr. j.

Triturate, mix, divide into ten powders, and give one every fifteen or twenty minutes in one half to one teaspoonful of Neutralizing Mixture, until the nausea and vomiting cease. At the same time the patient should be placed in bed in a recumbent posture, which should be maintained during the entire active stage of the disease. The body should be thoroughly bathed in equal parts of lye water, and Tinct. of Capsicum. Also apply sinapisms along the spine, calves of the legs, abdomen and arms. They should be applied hot, made up of good ground mustard, and wet with hot vinegar. If there is thirst, hot rice coffee should be freely given. Also toast water and essence of beef, prepared as directed in the treatment of typhoid fever. If the nausea, vomiting, and diarrhæa, do not yield to the above treatment, the following compound may be given :

℞ Tinct. of Prickly Ash Berries..... ℥iij.
 Neutralizing Mixture..... ℥iij.
 Tinct. of Capsicum..... ℥iij.

Mix, and give one teaspoonful in hot peppermint sling every five or ten minutes. Also inject the bowels with the following mixture :

℞ Starch Water Oss.
 Tinct. of Xanthoxilin Berries..... ℥ij.
 Morphine..... grs. iij.

Mix, and give six ounces as an injection after each passage from the bowels. If reaction should not follow these measures, hot brandy toddy may be given in connection with them every half hour. If there should be cramp with the vomiting and diarrhæa :

R Gelsemin	gr. ij.
Hyosciamin.....	gr. j.
Pulv. Camphor.....	gr. ij.
White Sugar	gr. xxx.

Triturate, mix, divide into ten powders, and give one every half hour, or oftener, as the case seems to indicate.

If the discharges continue, and the patient be prostrated, the following compound will often be successful :

R Rhusin	gr. xij.
Quinine	gr. x.
Piperine	gr. xx.
Hydrocyanic acid.....	gutt. iij.
White Sugar.....	gr. xxx.

Mix, triturate, divide into twenty powders, and give one every thirty minutes. If the sinapisms produce too strong counter-irritation, they should be taken off, and large hot packs applied in their place. If the reaction should be followed by fever, Aconite should be given in quantities sufficient to control the circulation, and maintain moisture of the surface.

Where the patient has passed into the collapsed state, the following compound is valuable :

R Xanthoxylin	gr. xx.
Piperine	gr. x.
Oil of Capsicum.....	gutt. x.
White Sugar.....	gr. xxx.

Mix, divide into ten powders, and give as often as the symptoms indicate the necessity.

Shocks of electricity, passed through the stomach and liver, have been reputed of much value. Also highly stimulating diuretics, such as oil of Turpentine, Hemlock, Wintergreen, &c.

The following compound was used with much success by my colleague, the late Dr. Hotchkiss :

R Chloroform	ʒii.
Tinct. of Camphor	ʒii.
Tinct. of Opium	ʒi.

Mix, and give from ten to twenty drops every twenty or thirty minutes, as the case may be. As soon as the active stage has passed off, the patient should take freely of fluid nutriment containing the elements of the blood, for the purpose of restoring its exhausted condition. Also, he should remain quiet and in bed, and avoid both mental and physical exertions.

SMALL-POX, OR VARIOLA.

SYMPTOMS.

The premonitory symptoms of this disease do not vary much from those of ordinary bilious fever.

It is generally preceded by more or less languor, anorexia, headache, and constipation of the bowels. When these symptoms have continued for two or three days, the patient is seized with violent pain in the back, increased pain in the head and limbs, great restlessness; the pulse becomes accelerated, and the skin is hot and pungent. The eyes are suffused, and in some cases the fever is alternated with rigors or chills. On the fourth or fifth day of the disease, small red spots make their appearance on the face and neck, which gradually diffuse themselves over the entire body.

The eruption is at first pustular, but in the course of eight or ten days becomes vesicular at the apex, yet still remaining pustular at the base. The vesicular portion of the pustule has a cupped appearance, while the base remains white and opaque. Maturation commences from the tenth to the fifteenth day, at which time the pustules become covered with a mahogany-colored scab, terminating in desiccation and desquamation, and leaving a deep

pit. At this stage the patient generally has a fresh attack of fever, called the secondary fever. When the pustules are very numerous, and run into each other, the disease is called confluent small-pox. This is decidedly more violent than the simple form.

There is extensive œdema of the face and lower extremities, and inflammation of the fauces, lungs, and in some instances, the brain; and the disease not unfrequently terminates in consumption, blindness, and ulceration of the intestines.

TREATMENT.

In the treatment of small-pox, much diversity of opinion exists among eclectic physicians; but the treatment about to be described has not only proved universally successful in my own practice, but in that of several of my colleagues, who have had the most ample experience in this disease.

If called in the early stage, the first thing to be done is to give the patient an active cathartic of Podophyllin and Antibilious physic. The patient should then take a thorough spirit-sweat, after which the body should be thoroughly bathed in hot lye water, and the patient placed in bed, in a room well ventilated. The following compound should then be given:

R Bayberry Bark, Pulv.	℥ss.
Ginger, Pulv.	℥j.
Macrotys, Pulv.	℥ij.
Capsicum	℥j.

Mix, put it in one quart of water, steep for fifteen or twenty minutes, strain, sweeten, and give two or three tablespoonfuls every hour during the development of the disease. If there is fever, give Aconite to control it, and small doses of diaphoretic powders at night to procure rest, if necessary. The surface should be bathed in lye water and whiskey three or four times a day.

If the pustules should not fill well, and the strength of

the patient should fail, small doses of equal parts of Hydrastin and Quinine should be given three or four times a day. Also, give milk punch, beef tea, and such other articles of diet as are easy of digestion and nutritious. Collodion should be applied as a wash morning and evening, to prevent being marked by the eruption. If the disease be of the complicated variety, the constitutional symptoms will require more attention.

If the lungs become affected either by congestion or inflammation, they should be relieved by Lobelia and Capsicum. If the liver is thus diseased, Euonymine and Lep-tandrin may be used. If the glands of the bowels should become diseased, Hydrastin and the Nitrate of Silver pill as directed under the head of Typhoid Fever, should be given.

The fever should be controlled as in the simple form, and the patient's strength maintained by the use of beef tea, wine, porter, vegetable tonics, Chalybeates, &c.

RUBEOLA, OR MEASLES.*

In our humble opinion, this is both a contagious and infectious disease, affecting, in this climate, children and adults with almost equal severity; the disease is inflammatory, affecting at once the skin and gastro-pulmonary mucous membrane; in which, after catarrhal fever has continued about three days, a rash appears on the skin, at first in small stigmatized dots, not unlike flea-bites, which presently coalescing, form patches of a crescent or semi-lunar form; first on the face, and thence spreading gradually downwards over the whole body and limbs, at the end of four days they disappear by desquamation of the cuticle. In short, the symptoms which usher in an attack of measles, are the symptoms of coryza and catarrh.*

* Massie's Practice of Medicine.

TREATMENT.

In the great majority of cases, but little treatment is necessary, save to have the patient confined to the house, which should be kept of an agreeable temperature, and freely ventilated. The clothing should be changed daily, and the bowels kept regular by small doses of Neutralizing Mixture and Leptandrin.

Should symptoms of Pneumonia, Bronchitis, or Laryngitis make their appearance, an emetic of Lobelia and Sanguinaria should be administered, together with the warm bath and laxative enema. As soon as the effects of the emetic have passed off, the following compound should be given, if a child over eight years of age; if younger, in proportion to the age:

R Triturated Belladonna.....	gr. x.
Sulphate of Cinchonin	gr. xx.
Triturated Leptandrin	gr. xx.

Mix, divide into ten powders, and give one every two hours; also give freely of warm sage tea.

If there should be fever, and pain in the head, five drops of Aeonite, added to three ounces of water, and a teaspoonful given every half hour, will soon control it.

If, as sometimes happens, the patient should be seized with convulsions, small doses of equal parts of Lobelin and Scutellarin, given every ten or fifteen minutes, will relieve them.

The surface should be frequently sponged, and if there is heat in the head, moderately cold packs should be applied and continued until the head is relieved.

The diet should be light, and taken in small quantities. If Ophthalmia makes its appearance during the disease or afterwards, mild zinc ointment should be used, and the eyes should be frequently bathed in warm milk and water.

VARICELLA, OR CHICKEN-POX.

This is a contagious disease, and in its first appearance, bears some resemblance to small-pox.

SYMPTOMS.

Small, pointed, transparent red vesicles, some of which become pustular. They run their course in from five to six days, without producing any very marked constitutional disturbance.

TREATMENT.

The diet should be regulated, and regularity of the bowels maintained. If fever arises, give Aconite in small quantities, and a gentle purgative of Euonymine and neutralizing mixture.

MANIA-POTU, OR DELIRIUM
TREMENS.

This disease in some of its symptoms, resembles inflammation of the brain. It is caused by the use of Alcoholic drinks.

SYMPTOMS.

Constant wakefulness, and motion of the hands and arms, and continual delirious talk. The whole body is in a state of tremor, wrongs are imagined, injuries apprehended, and the patient constantly beholds imaginary images, which terrify his mind, producing great mental excitement. This disease is easily distinguished from Pleuritis, by the softness of the pulse, the flushed face, and the habits of the patient.

TREATMENT.

In this disease it is necessary to continue the use of stimulants, in a moderate degree. The patient should take warm whiskey toddy, mixed with starch water, often enough to maintain a decided influence of the spirits upon the brain. At the same time give freely of beef tea, wine whey, soft boiled eggs, &c. If the disease does not yield to the above treatment, give the following compound :

R Morphine gr. ij.
 Capsicum..... gr. xx.

Divide into ten powders, and give one every two or three hours till the disease yields.

Or,

R Scutellarin..... gr. xx.
 Hyosciamin gr. iij.
 Cypripedin gr. xx.

Triturate, mix, divide into ten powders, and give one every hour. When the disease becomes manageable, the use of alcoholic drinks should be discontinued, and the patient warned against the use of a drug, the effects of which are fraught with so much evil. During the treatment, the bowels should be kept regular, by the use of mild stimulating alteratives, and the skin thoroughly cleansed by bathing.

HYDROCEPHALUS, OR DROPSY OF THE BRAIN.

SYMPTOMS.

When the disease comes on moderately, the patient becomes peevish and fretful. If it is a child, which is most frequently the case, there will be frequent extension of the hands to the head, and the sleep will be disturbed

by frightful dreams, causing starting, jumping, and screams.

As the disease advances, there is anorexia, dizziness, vertigo, nausea, vomiting, and delirium.

The pulse is soft and quick, and the tongue is covered with a light coat. In the early stage of the disease, the bowels are costive; but in the latter stage, there is frequently diarrhæa. Paralysis and convulsions often result from this disease.

TREATMENT.

In the early stage of this disease, Aconite should be given to control the fever and inflammation. After which, a purgative of Podophyllin and Jalapin should be given. Warm water and whiskey should be applied to the head, and sinapisms to the feet and calves of the legs. After the operation of the cathartic, give the following compound:

R Syrup of Marshmallow..... ʒiij.
Iodide of Potassium..... ʒij.

Mix, and give one half teaspoonful every hour. At the same time, give two or three tablespoonfuls of strong Buchu and uva ursi tea, and ten drops of sweet-spirits of Nitre every three hours. If there is much debility, connected with periodical symptoms, the following compound may be given, with the above treatment:

R Quinine gr. x.
Ferrocyaniide of Potassium..... gr. j.
Digitalin..... gr. j.
White Sugar..... gr. xl.

Triturate, mix; divide into twelve powders, and give one every three hours. The purgative should be repeated, and the strength of the patient maintained by the free use of Iron, vegetable tonics, and a nutritious diet.

ASCITES, OR DROPSY OF THE ABDOMEN.

SYMPTOMS.

Swelling of the bowels, and often a fluctuation which may be perceived by laying the hand on one side of the abdomen, and at the same time gently rubbing the other side. This disease is mostly connected with Anasarca, or a collection of water in the cellular tissue, indicated at first by swelling of the feet and ankles towards night, but which disappear before morning. Pressure of the swollen parts with the finger in the evening, produces indentation, which remains for some time. The swelling gradually ascends to the trunk of the body, the arms and the head.

At this time the breathing becomes difficult, the urine is scanty and high-colored, the bowels are costive, the countenance is heavy and bloated, the skin is dry, and has a dirty sallow appearance, there is a dry cough and a slow irregular fever.

When these symptoms have continued for a longer or shorter time, there is generally a deposition of tuberculous matter in the lungs, a hectic fever, and unless the progress of the disease is arrested by timely treatment, death is the result. The use of Mercurials, the suppression of the Catamenia, Chronic ague, improper diet, &c., are among the causes of this disease.

TREATMENT.

The first object should be to remove the cause. At the same time, means should be resorted to by which the blood may be restored to a natural condition, and at the same time relieve the different tissues from their incumbrance of water. The patient should be placed upon a strong nutritious diet, and should freely use beef tea, porter, &c., and should take the following compound :

℞ Iron by Hydrogen..... gr. xx.
 Syrup of dwarf Elder..... Oss.
 Cream of Tartar.. ʒss.

Mix, and give one tablespoonful three or four times a day. Two or three times a week the patient should take a thorough spirit-sweat, and the body should be sponged every morning in warm or cold water, as the condition of the case may indicate.

If the patient's strength will warrant, a cathartic of Jalapin and Cream of Tartar may be given once or twice a week. When the above course has been pursued for a few days, if the patient does not manifest signs of rapid recovery, give the following compound :

℞ Digitalin..... gr. iij.
 Cinchonine..... gr. xxx.
 Phosphate of Iron..... gr. xxx.
 White Sugar..... ʒj.

Mix, triturate; divide into sixteen powders, and give one four times a day in watermelon seed tea.

After these are all taken, the syrup should be resumed, and the vapor bath continued.

Every possible means should be resorted to by which the patient's strength may be maintained.

PAROTITIS, OR MUMPS.

This is a contagious disease, affecting the Parotid gland.

SYMPTOMS.

The skin becomes hot and dry, the pulse increases in frequency. The tongue is covered with a thin white coat, the bowels are costive, and the urine is scanty and high-colored. These symptoms are followed by a swelling just

below the angle of the lower jaw, sometimes on one side, at others on both. The swelling increases rapidly for about two days, when it begins to decline.

This disease is frequently transferred from the glands of the neck to the mammary glands, in the female, and to the testicles of the male.

TREATMENT.

If there is much fever in the active stage, the body should be bathed in warm lye water, and Aconite given in quantities sufficient to subdue it. The patient should keep quiet, and in bed. If the bowels are confined, a mild dose of Antibilious Physic may be given. If there should be a metastasis of the disease, a stimulating liniment should be applied, such as Tinct. of Capsicum and Myrrh, and a mild alterative of Euonymine given two or three times a day.

EPILEPSY.

SYMPTOMS.

The patient falls suddenly, and is seized with convulsions. The features are distorted and fixed, the senses are suspended, and the subject paralyzed. During the struggle, mucus, commingled with bubbles of air, issues from the mouth. The breathing is generally hurried, and the pulse is feeble and frequent. These attacks return at stated periods, and generally increase in severity as the patient grows older. The disease is frequently developed by irritation from teething, worms, suppression of the menses, blows upon the head, spermatorrhœa, &c.

TREATMENT.

In the early stage of the disease, but little need be done save to remove the cause. But after the disease has become established, the convulsions will continue, although the cause be removed.

In such cases the intermittent and antiperiodic treatment is that only which has proved successful in my hands. While the patient is laboring under the paroxysms, the following mixture should be given :

R Fluid Extract of Scutellaria,	} ad libitum.
“ “ of Lobelia,	
“ “ of Cypripedrin,	

Equal parts. Mix, and give from ten to twenty drops every ten or twenty minutes, until the convulsions cease. Then open the bowels by a mild, neutralizing physic, and the skin by tepid baths, after which give the following compound :

R Chinoidin	gr. xxx.
Fiburine	gr. xx.
Quinine	gr. x.

Mix, divide into twenty powders, and give one three times a-day. Continue the powders between the first four or five paroxysms, and relieve the patient during the paroxysms by the anti-spasmodic mixtures, followed by the cathartic. If the above treatment does not interrupt the paroxysms in the course of eight or ten weeks, the following mixture may be given between the spasms :

R Port Wine	Oss.
Hydrocyanic acid	gutt. xx.
Quinine	gr. xx.
Iron by Hydrogen	gr. xxx.

Mix, and give one teaspoonful three times a-day. The patient's bowels should be opened by mild purgatives. The mind should be kept cheerful, and the diet should be nutritious, and of easy digestion. The antiperiodic and

intermittent treatment should be pursued until a cure is effected, which will be the case in the course of time, unless there is some organic lesion of the brain.

APOPLEXY.

Sanguineous Apoplexy is the effusion of blood into the substances of the brain. Traumatic, or Apoplexy caused by blows on the head, is the effusion of blood into the membranes of the brain.

SYMPTOMS.

Apoplexy is generally preceded by giddiness, pain and swimming in the head, ringing in the ears, and laborious respiration. In Sanguineous apoplexy, if the person does not drop dead at once, he gradually becomes stupid, until he passes into a profound sleep; the face is swollen, the eyes are fixed, the blood-vessels about the neck beat rapidly and forcibly, the breathing is sonorous, and it is impossible to arouse the patient from his state of lethargy.

TREATMENT.

Ligaturès should be placed around the arms close to the shoulder; also, around the legs at their connection with the body. They should be so adjusted as to admit of the passage of the blood through the arteries, but to prevent its return through the veins.

If the patient can swallow, a large dose of antibilious physic should be given. The feet should be placed in hot water, and cold water applied to the head. If the circulation continues to be rapid, *Veratrum* should be given in quantities sufficient to moderate its action.

The ligatures should be kept on until the patient appears entirely relieved, but should be tightened or loosened according to circumstances. If symptoms indicate hemor-

rhage to any considerable extent, small doses of Digitalin should be given three or four times a day, in connection with Iodide of Potassium. The bowels should be kept regular, and the diet mild.

CHOREA, OR ST. VITUS' DANCE.

SYMPTOMS.

There is a lameness of one leg, which is partly deprived of its natural motion. The arms are next affected, and are thrown into various contortions. The muscles of one side of the face have a constant involuntary motion. The appetite is lost, and the bowels become irregular.

TREATMENT.

R Scutellarin	gr. xxx.
Cypripedin	gr. xx.
Carbonate of Iron	ʒij.
Port Wine	℥j.

Give one tablespoonful three times a day. The bowels should be kept open with small doses of Euonymine, and the surface should be bathed with tepid water every morning. If the disease should be caused by suppression of the menses, Macrotin should be given in connection with Iron. If by worms, Santonine and Podophyllin. If by ague, some of the antiperiodic compounds may be given.

PARALYSIS, OR PALSY.

If the palsy is confined to one side of the body, it is called Hemiplegia. If to the lower half, Paraplegia.

TREATMENT.

When the palsy attacks the heart, lungs, or any other vital organ, it soon terminates in death. But when it

arises from injuries of the spine, effusions into or softening of the brain, or in a deficiency of nervous fluid, the following treatment may be resorted to with hopes of success. First. The patient should be enjoined to remain quiet in bed, and if an injury to the spine is the cause of the disease, the irritating plaster should be applied along the spine. The bowels should be acted upon by giving small doses of antibilious physic, and a mild current of electricity should be passed from above the part of the injury through the paralyzed parts. The diet should be sufficient to maintain an ordinary degree of health. A liniment should be applied to the palsied part, composed of the following substances :

R Oil of Origanum.....	3ij.
“ Capsicum.....	3j.
“ Stillingia.....	3ij.
“ Alcohol	Oj.

Mix, and bathe the affected part three or four times a day, following the same by brisk friction. The patient should take from one to three drops of the Tinct. of Rhus Toxicodendron from one to three times a day. If the disease occurs from injuries of other parts of the body, a similar course should be pursued, both as regards the electricity and counter-irritation. If there should be softening of the nervous centres, or brain, from one to five drops of the Tinct. of Phosphorus should be given three or four times a day, in connection with chalybeates and vegetable tonics.

This course should be persisted in for some length of time, unless the disease yields. In quite a number of cases with which I have been familiar, recovery has taken place after a lapse of more than a year's treatment.

TETANUS, OR LOCKED JAW.

This disease generally arises from wounds, but occasionally it is a symptom of other diseases.

SYMPTOMS.

Stiffness in the back of the neck, difficulty of swallowing, rigidity of the muscles of the lower jaw, also of those of the spine, and sometimes nearly all the muscles of the body are involved.

TREATMENT.

If this disease is caused by a wound, it should be thoroughly burnt with caustic, and a poultice applied until a complete discharge is produced. At the same time the patient should take a lobelia emetic, followed by Euonymine and Jalapin, until it operates as an active cathartic. After which, give the following compound :

R Dioscorine..... gr. xx.
 Scutellarin..... gr. xxx.
 Quinine gr. xx.

Mix, divide into ten powders, and give one every two hours until all are taken. If the disease is not removed, the Lobelia emetic should be repeated, and again followed by the powders. The skin should be kept cleansed by lye water baths, and a free diet allowed.

The above treatment has proved triumphantly successful in my hands in several well-marked cases of this disease.

HYDROPHOBIA.

This disease is caused by the bite of rabid animals. The wound generally heals rapidly, and it is not until

twenty or thirty days have elapsed that any pain is felt in the wound.

SYMPTOMS.

Anxiety, restlessness, nervousness, loss of sleep, horror of water, and finally convulsive spasms, are the prominent symptoms of the affection.

TREATMENT

In the treatment of this disease, much depends upon thoroughness and perseverance. The wound should be canterized with caustic Potassa, and caused to discharge freely for five or six weeks. The patient should take an active Lobelia emetic, followed by a brisk Podophyllin cathartic, and a spirit sweat. After which, the following compound should be given :

R Scutellarin.....	gr. xx.
Cypripedin.....	gr. xx.
Lobelin.....	gr. v.
Quinine	gr. xxx.

Mix, divide into ten powders, and give one every two hours until all are taken. At the same time, a strong decoction of Plantain should be drunk freely during the day. Lupulin and Hyosciamin should be given at bedtime, to produce sleep. The emetic and other remedies should be continued until the patient is entirely relieved from the disease.

This treatment has proved successful in the hands of several eclectic physicians.

DIABETES, OR SACCHARINE URINE.

This disease has its primary cause in the stomach.

SYMPTOMS.

It is generally preceded by debility, anorexia, dry skin, pain in the lumbar region, and great thirst, with alternate attacks of chills and fever. On examining the urine, it is found to have a sweetish taste and smell.

TREATMENT.

Give one grain of Aletrine in a tablespoonful of brandy toddy three times a day, and keep the surface freely bathed in warm broke water and whiskey.

In the early stage of the disease, this treatment, if persisted in for three or four weeks, will generally effect a cure. But in the more advanced stage, where the kidneys have become organically affected, the irritating plaster should be applied over that region, and the following compound given :

R Xanthoxilin.....	gr. x.
Populin	gr. x.
Prunin	gr. x.
Sach. Alba.....	gr. xxv.

Mix, divide into twelve powders, and give one every three hours. After which, give the following :

R Syrup of Sugar.....	℥ij.
Tinct. of Capsicum.....	℥ij.
Muriated Tinct. of Iron.....	℥j.

Mix, and give one teaspoonful three times a day. If there are intermittent symptoms, some of the antiperiodic compounds should be given, followed by bitters made of Brandy and Aletris Farinosa.

The bowels should be kept regular, and the stomach evacuated with Sanguinarin, and Lobelia if indicated.

RHEUMATISM.

Acute rheumatism commences with weariness, shivering, quick pulse, restlessness, thirst, and fever. The patient soon complains of pains in some of the joints, which increase by motion. The parts swell, and have a red and inflamed appearance, the tongue is covered with a heavy white coat, the bowels are costive, the urine scanty and high-colored.

TREATMENT.

R Podophyllin..... gr. ij.
 Xanthoxilin gr. iij.
 White Sugar gr. xxx.

Mix, triturate, and divide into eight powders. Give one every hour until it operates as a cathartic. After which, give the following compound :

R Sanguinarin..... gr. ij.
 Iridin..... gr. j.
 Quinine gr. x.

Mix, divide into ten powders, and give one every three hours. The body should be thoroughly bathed in strong salt and water, and the inflamed joints packed with hot cloths. If the disease does not yield, a pill may be given composed of the following materials :

R Ext. Hyosciamus..... gr. ij.
 Ext. Indian Hemp..... gr. xx.
 Capsicum gr. x.

Mix, form a mass, and make three-grain pills. Give one every three or four hours. If there is fever, Aconite or Veratrin should be given to control it. If the rheumatism is of a chronic character, give the following :

R White Pine Turpentine..... gr. xxx.
 Extract of Poke Root gr. x.
 Macrotin gr. v.
 Apocynin gr. x.

Mix, form a mass, and make three-grain pills. Give one every five hours. Animal broths should be taken freely as a diet. The kidneys should be stimulated by mucilaginous diuretics, and stimulating liniments should be applied to the affected limbs.

Much care should be taken not to induce metastasis to the heart; but if that should occur, Aconite, compound syrup of Stillingia, and Iodide of Potassium are the remedies.

TRACHEITIS, (CROUP, OR INFLAMMATION OF THE TRACHEA.)

This disease is divided into two varieties, the spasmodic and pseudo-membranous. In the spasmodic form, there is a sudden contraction of the Trachea, owing to a slight cold, or the transmission of irritation to that organ from the stomach and gums in teething. The only treatment required in this form of the disease, is some active anti-spasmodic. It may be distinguished from the Pseudo-membranous variety, by its sudden appearance at night, when the child was apparently well during the day, and by its almost as sudden disappearance on the administration of a few drops of Tinct. of Lobelia, and the application of a wet pack to the neck.

The symptoms of the spasmodic kind, are a sudden hoarse cough, followed by a whistling and difficult respiration.

The symptoms of the pseudo-membranous kind, are very insidious. The child is irritable, restless, and peevish, and at times has a fever. He will also be observed to spit frequently. These symptoms, in the course of from twenty-eight to thirty-six hours, will be followed by a slight cough, which increases, and the voice soon becomes hoarse.

The disposition to spit also increases, and the sputa, if examined, is found to be of an albuminous character, thus clearly indicating the nature of the disease.

The symptoms are all aggravated at night, the pulse becoming quick, and the breathing laborious; but in the morning, they are much ameliorated. In the afternoon, the symptoms again appear, and are greatly aggravated.

The child throws his head back, and frequently grasps at the neck, the expectoration ceases, the breathing is more labored, and the pulse more frequent. He is unable to speak above a whisper, and unless relieved by proper treatment, soon becomes stupid and expires.

TREATMENT.

The treatment here recommended, is of a very simple character, and rather belongs to Prof. J. G. Jones than to myself. And as all other methods with which I have been familiar have almost universally failed, while this has always proved successful, I most confidently recommend it to the profession as the only radical cure ever offered for this hitherto almost invariably fatal disease.

In the early stage, a thorough Podophyllin and Cream of Tartar cathartic should be given, the feet should be placed in hot water, and a cold wet pack applied to the throat. The pack should be changed sufficiently often to keep it cold. After which, the patient should be put upon a mild acetic syrup :

R Sanguinaria Pulv.....	ʒi.
Acetic acid.....	ʒiij.
White Sugar	ʒiij.

Mix, steep for fifteen or twenty minutes, and give one half teaspoonful every half hour. This prescription should be continued as long as any symptoms of the disease remain. If the treatment is not commenced until the disease is far advanced, the cathartic should be omitted, and the syrup

given at once. The bowels should be moved by laxative enema, and the surface frequently sponged in tepid water.

If the disease proves obstinate, two or three antiperiodic powders should be given during the Apyrexia. The syrup should also be continued. There should be no more of the syrup given than the stomach will tolerate.

The strength should be maintained by a generous diet, and all excitement should be avoided.

WORMS.

According to the classification of the entozoist, the following are the different varieties that infest the alimentary canal :

- 1st. *Ascaris Lumbricoides*, or common round worm.
- 2d. *Ascaris Vermicularis*, or thread worm.
- 3d. *Tricocephalus Dispar*, or long thread worm.
- 4th. *Tænia Solium*, or common tape worm.
- 5th. *Tænia Lata*, or broad tape worm.

The most common varieties of worms met with in this country, are the common round worm, mostly found in the small intestines, and the short thread worm, which inhabits the rectum or lower portion of the bowels.

SYMPTOMS.

The symptoms of worms are various. The most common are frequent flashes of fever, which disappear in a few hours ; irregular appetite, irritable temper, symptoms of irritation about the fauces, tumefaction of the glands, frequent changes in the appearance of the urine, which is at one time scanty, and of a milky appearance ; at others, copious and limpid. The irritation will be so great at times as to affect the brain, and convulsions follow. If the

worms infest the rectum, there will be constant itching and uneasiness of that part, and at times a slight sanious discharge.

TREATMENT.

For the long round worm :

℞ Santonine gr. vj.
 Podophyllin gr. j.
 White Sugar gr. xxx.

Mix, triturate, divide into twelve powders, and give one every three or four hours until they act upon the bowels. If this should fail, the following mixture may be given :

℞ Neutralizing mixture ℥ij.
 Essence of Wormwood ℥j.
 Tinct. of Aloes ℥ss.
 Santonine gr. x.

Mix, and give one teaspoonful three times a-day.

Or—

℞ Santonine gr. x.
 White Sugar gr. xxx.

Triturate, divide into ten powders, and give one every night on going to bed. After two or three days, give a mild purgative. If the patient is troubled with *Ascarides*, in addition to the above, injections should be given :

℞ Santonine gr. xx.
 Hydrastin gr. xx.
 White Sugar ℥j.
 Warm water ℥iv.

Mix, and give as an injection every morning and evening. If either variety of the tape-worm afflicts the patient, the following mixtures may be given :

℞ Fresh Pumpkin-seeds after the shell is taken off ... ℥ij.
 White Sugar ℥j.

Bruise and mix. Give one teaspoonful every half hour until all is taken. After which give a brisk purgative of Podophyllin. If the first mixture does not succeed, it may be repeated. Or the following compound may be given :

R Oil of Male Fern	ʒij.
“ Turpentine	ʒij.
“ Red Cedar	ʒj.
“ Worm Seed	ʒij.
Castor Oil	ʒij.

Mix, and give one teaspoonful every half hour until it operates upon the bowels. During the treatment for the tape-worm, the patient should abstain from food; and if the passage of the worm is commenced, it should be carefully wound around a stick, to prevent it from being broken.

ANEMIA, OR CHLOROSIS.

SYMPTOMS.

The symptoms of this disease are paleness of the skin and mucous surface, and a peculiar white appearance of the conjunctiva. When the disease has advanced for some time, the countenance assumes a sallow and bloated appearance. The patient is feeble, and cannot bear much exertion. The circulation is irregular and weak; the respiration, although natural when the patient is quiet, becomes labored on the least exertion, and there is frequently violent palpitation of the heart.

The nervous system is most disordered; vertigo, dizziness, and feelings of fainting are not uncommon. At times there are violent neuralgic pains in the head, back, limbs, and side. In females the menses are almost entirely suppressed or altogether wanting. The blood in this disease is found to be deficient in iron.

TREATMENT.

R Carbonate of Iron	ʒij.
Port Wine	Oj.
Common Salt	ʒij.
Hydrastin	ʒj.

Mix, and give one teaspoonful three times a day. If the patient is a female with partial or complete suppression of the menses, the following pill should be given :

R Senecin	gr. xx.
Macrotin	gr. v.
Vallee's mass	gr. xxx.
Podophyllin	gr. j.

Mix, form a mass, and make three-grain pills. Give one in connection with the wine tonic three times a-day. The diet should consist of rich animal broths, and the patient take plenty of out-door exercise. The bowels should be kept open by the use of some mild laxative, such as Apocynia and Euonymine. If the disease does not yield, the following compound may be given :

R Brandy	Oss.
Water	Oss.
Phosphate of Lime	℥ij.
Iron by Hydrogen	gr. xxx.
White Sugar	℥iv.

Mix, and give one tablespoonful three times a-day. The above treatment, together with cold baths, followed by a reaction, will generally prove effectual. .

MILIARY FEVER

Is characterized by an irregular eruption of round vesicles of the size of a millet-seed, upon slightly elevated and inflamed patches of cuticle.

It mostly commences with rigors and languor, a quick pulse, hot and dry skin, and thirst. The eruption generally appears about the fifth or sixth day from the commencement of the febrile attack. Previous to its appearance, there is a sense of pricking or itching of the skin. The patient complains of great præcordial oppression, but is soon relieved by a profuse perspiration, and in the course

of from three to five days the vesicles form into small scales, and fall off.

The eruption is generally distinct, but is sometimes confluent. It is said rarely to affect the face, and different crops may appear in the same fever. It is mostly a symptomatic disease, and occasionally appears in the course of nearly all low forms of fever;—although it may be idiopathic when it attacks those who have been previously weakened by fatigue, or a long exposure to damp and malarious atmosphere; or who have been for a long time confined to a bad regimen.

TREATMENT.

As this disease is mostly dependent upon constitutional debility, caused by some previous difficulty, it will be of the first importance to ascertain the cause, and remove it; after which the skin should be thoroughly bathed in warm lye water, and small doses of Aconite administered until a free perspiration is produced. For the purpose of stimulating the secretions, and as a mild purgative, the following compound should be given:

Euonymin	gr. iij.
Irisin	gr. ij.
White Sugar.....	gr. xxx.

Triturate, mix, divide into ten powders, and give one every hour until all are taken, or until they act upon the bowels. If the disease does not yield to this mild treatment, small doses of Quinine and Iron together, with an active, stimulating, and nutritious diet, should be resorted to. When the active stage of the disease is passed, the patient should be allowed a liberal quantity of porter, in connection with vegetable tonics and chalybeates. If the disease is connected with a scrofulous diathesis, the compound syrup of Stillingia, with Iodide of Potassium, should be given until the patient is entirely restored.

ROSEOLA, OR ROSE-RASH,

Is a fever attended with a rose-colored efflorescence, and not contagious. It has often been confounded with measles and scarlet-fever. It mostly depends upon indigestion, and seldom requires medical treatment. The diet should be regulated, and if the fever is troublesome, small doses of Aconite, and a gentle purgative of Neutralizing mixture, may be given.

URTICARIA, OR NETTLE-RASH,

Is characterized by circular elevations of the cuticle, of a red color, with a white spot in the centre.

The eruption is generally preceded by gastro-intestinal irritation and fever. There is frequently restlessness, languor, and anorexia. If the eruption is extensive, the patient suffers much from the itching and heat which it occasions. This disease is frequently caused by excess in eating and drinking, also by undue heating of the blood. It may continue for an indefinite period, and reappear whenever the stomach becomes deranged.

TREATMENT.

The patient's diet should be well regulated, and all excesses carefully avoided. The surface should be freely bathed, two or three times a week, and a mild vegetable alterative and tonic be given. If the disease assumes a periodic character, as it sometimes does, an antiperiodic should be administered, succeeded by the following compound :

R Cream of Tartar.....	gr. xxx.
Leptandrin	gr. xx.
White Sugar	gr. xxx.

Triturate, mix, divide into ten powders, and give one three times a day.

THE PLAGUE.

This disease is regarded as nothing more than a malignant typhus fever, attended during its course, by buboes and carbuncles.

Mackintosh gives the following diagnostic symptoms of the Plague :

It is ushered in by rigors and oppression, followed by heat of the skin, great prostration of strength, giddiness and headache. The expression of the countenance is besotted, and the eyes have a muddy glistening appearance.

The intellect is sometimes cloudy, at others there is insensibility and fixed delirium.

Occasionally, stupor takes place, and in some instances the functions of the brain remain distinct and clear. The patient in general seems indifferent respecting his fate. The tongue is at first moist, although it is more or less loaded. There is sometimes constipation, at others diarrhæa. The stools are very offensive, and there is constant nausea and vomiting. About the third day from the attack, there is acute pain, followed by redness and swelling in the arm-pits and groins, which terminates in carbuncles and buboes, unless it is immediately relieved. And unless suppuration soon takes place, death speedily follows. It is stated that if the patient survives the fifth day, and the buboes appear well-formed, the patient may be pronounced convalescent. The points of danger in this disease appear to be, the time in which the buboes ought to appear, and the time of maturation. For a full description of this disease, the reader is referred to the writings of Dr. James McGregor, who has described it minutely, as it appears in India and Egypt.

TREATMENT.

Cullin condemns both blood-letting and purgatives in this disease, and states that the chief object in the treatment should be to relieve the spasms of the extreme vessels. For this, he recommends the application of oil to the surface, and some antispasmodic internally. There can be no doubt that this disease requires a vigorous, stimulating, and antiperiodic treatment from the commencement. From all the information I can obtain, I should make a liberal use of hot alkaline baths, antiperiodics, and a free use of Aconite to control the fever. Also a liberal use of tonics, antispasmodics, and stimulants, with a nutritious diet.

DIFFICULT DENTITION.

Few children pass through the process of dentition without more or less suffering, and often a variety of complicated symptoms make their appearance, all depending upon one general cause, viz: dentition. It has long been observed, that children who pass through the period of teething early, suffer less than those whose teeth are longer making their appearance.

The ages at which children cut their teeth are various. There are instances of children being born with full sets of teeth, as is recorded of Richard the Third and Louis Fourteenth. In general, however, the teeth begin to appear between the age of six and eight months. The two centre incisors of the lower jaw, are commonly cut first, and are soon followed by those of the upper, after which the two lateral incisors of the lower, and then those of the upper jaw make their appearance. Between the twelfth and sixteenth months, the intergrinders of the

lower jaw appear, and next in succession are the cuspides or eye teeth. The others soon follow, so that by the age of two years, the child has its complete set of teeth, twenty in number. The formation of each tooth goes on in a membranous and vesicular sack, which is firmly united to the gum. It is supposed that in tedious and difficult dentition, the sack becomes more vesicular, and is materially thickened. This, together with the pressure of the teeth upon the gums, is supposed to be the only cause of the various ills incident to this period.

The teeth are composed of Phosphate and Carbonate of Lime, Fluoride of Calcium and Cartilage.

On analysis by Berzelius they were found to be composed of

Cartilage and vessels.....	28.0
Phosphate of Lime.....	64.2
Carbonate of Lime.....	5.3
Phosphate of Magnesia.....	1.0
Soda with Chloride of Sodium.....	1.1

According to Lessaigne, it appears that as the teeth become older there is an increase of the Phosphate of Lime, and a corresponding diminution of the Carbonate. From the above facts, it seems the food should contain these elements, to enable the teeth to become perfectly and timely developed. The cause of the diseases so frequently identified with dentition, is a lack of the proper histogenetic material, thereby causing a drain upon the other tissues, which, together with the long-continued irritation of the teeth upon the nerves, produces a train of morbid symptoms, which are attributed to anything but their true source.

The child, under these circumstances, becomes restless, fretful and feverish, the sleep is disturbed, the bowels are irregular, the face is flushed, and in some cases there is slight spasmodic twitching of the muscles, and in others general convulsions.

Sometimes the child becomes troubled with an irritable cough, with wheezing, a hot skin, quick pulse and scanty urine, denoting great irritation of the bronchial and pulmonary tissues. Cutaneous and glandular affections often occur. The sub-maxillary glands are those most commonly affected. Occasionally there is inflammation of the eyes, causing purulent Ophthalmia.

The enumeration of the above symptoms will show the importance of a correct diagnosis in these cases.

TREATMENT.

There is no disease in which the ordinary allopathic treatment proves more mischievous than in this.

The poor child has its gums scarified and mutilated to no purpose. In some cases its stomach and bowels are entirely destroyed by the drastic doses of Calomel, Rhubarb, Prepared Chalk, and the like; while in other cases, Opium, Paregoric, Godfrey's Cordial, Bateman's Drops, and a long catalogue of irritants and narcotics, tending still farther to depress the feeble vitality of the child, cause Dropsy of the Brain, Tabes Mesenterica, and Tuberculous Consumption. Now these medicines have not one particle of the aliment needed to build up the structure which is making such extensive drains upon the other tissues, and causing such derangement of the vital powers. The scari-fying of the gums frequently produces an irreparable injury to the teeth, by denuding them of their soft enamel, an injury seldom repaired. Hence the frequent premature decay of the teeth. The proper treatment consists in administering in small quantities those elements of which the system is deficient. For instance :

R Phosphate of Lime.....	gr. xx.
Carbonate of Magnesia.....	gr. x.
Phosphate of Iron.....	gr. v.
Simple Syrup.....	℥iij.

Dose, one teaspoonful three or four times a day. If there is fever, a few doses of Aconite, given at intervals of from half an hour to an hour, will be sufficient to control it. If the disease proves persistent, or assumes a periodical character, Quinine may be given in combination with some of the other articles, or alone as indicated. If Bronchial irritation is the prominent symptom, two or three drops of the Tct. of Veratrum may be given every three or four hours until the symptoms subside. If there is diarrhæa, Neutralizing Mixture, with small doses of Geranin, should be given. The surface should be frequently bathed, and the diet should be nutritious and of easy digestion. The Lime, Magnesia and Iron should be continued from time to time until dentition is complete.

Many cases might be adduced to illustrate this mode of treatment, but one will suffice.

In June, 1855, I was called to see a child fourteen months old, in which the teeth had not made their appearance.

The Doctor (Allopathic) had pronounced it to have Pneumonia. It had been afflicted with alternate diarrhæa and costiveness for three months, and on two or three occasions had had convulsions. Its gums had been lanced eight or ten times. I immediately ordered Magnesia, Lime and Iron, with small doses of Quinine, and a good diet, and in three weeks the constitutional difficulties had disappeared, and the teeth had begun to make their appearance. In the course of six months, by the occasional use of the above remedies, the teeth were fully developed, and the child restored to perfect health.

INFLAMMATION AND ULCERATION OF THE ŒSOPHAGUS.

There is no structure in the human body more exempt from disease than the œsophagus; but when it becomes inflamed, it is quite difficult to detect it until ulceration and constriction take place.

Inflammation may be partial, affecting only a small portion of the œsophagus, and if ulceration occurs, there will be no contraction; but the patient will feel slight pain, and there will be momentary stoppage of the food as it passes on to the stomach. If the whole caliber is inflamed, the difficulty of swallowing will be much greater, not so much owing to the stricture of the œsophagus, as to the constant tendency to vomit. There will be more or less constitutional symptoms, as debility, hot skin, scanty urine, &c. Not unfrequently the entire system materially sympathizes with the local affection.

TREATMENT

The constitutional symptoms should be removed, and at the same time an irritating plaster should be applied to the throat, or the region of the inflamed and ulcerated parts, and caused to remain until a free discharge ensues. The bowels should be maintained in a soluble state, and the skin freely bathed in hot lye water and whiskey as often as two or three times a week. And the following compound should be administered:

R Syrup of Marshmallow..... ʒiij.
Syrup of Iodide of Iron..... ʒij.
Compound Syrup of Stillingia..... ʒj.

Mix, dose one teaspoonful three times a day. The diet should be nutritious and easy of digestion, and every possible exertion should be made to maintain the integrity of

the constitution. If the ulceration proves unyielding, a strong solution of Hydrastin, to which may be added a few drops of the Tct. of Iodine, may be taken in reasonable doses three or four times a day.

If the above treatment should not prove successful, the application of a mild solution of nitrate of silver may be made once or twice a week by means of a probang. The above remedies will be sufficient to effect a cure, provided the cause of the disease has received due attention.

GASTRODENIA.

Gastrodenia is a neuralgic affection of the stomach, and is closely allied to dyspepsia, and in some instances appearing as one of its symptoms. Sometimes the appetite remains good, but generally it is impaired. There is gnawing pain in the stomach, extending to the back, accompanied with anxiety and sense of constriction, with a strong tendency to vomit. There is constipation of the bowels, and more or less pain in the head. The principal causes of this disease are the long-continued use of indigestible food, very warm or very cold drinks, or the use of Alcoholic drinks, schirrous and cancerous affections of the stomach, &c.

TREATMENT.

If the disease is dependent, either upon irregularities of eating or drinking, or upon the excess of either, this should be carefully avoided. During the attack, much benefit may be derived from an emetic.

R Lobelia Seed Pulv..... gr. x. .

Bayberry Bark Pulv..... gr. xxx.

Mix, add one half pint of warm water, two tablespoonfuls of milk, sweeten, steep fifteen minutes, and give a wine-glass full every fifteen minutes till it operates freely as an emetic. After which,

R Lupulin.....	gr. x.
Scutellarin	gr. xx.
Leptandrin.....	... gr. xxx.

Mix, triturate; divide into fifteen powders, and give one every three or four hours. If the pain still continues in the stomach, small doses of Morphine may be taken at bedtime. The constitutional symptoms should be carefully attended to, and if the disease becomes periodical, one of the antiperiodic preparations should be administered. The diet should consist of animal and vegetable broths, and the body well bathed in warm or cold water as often as three or four times a week.

HÆMATEMESIS.

This disease most frequently attacks women, particularly those who are of a plethoric habit, and at times when there is a suppression of the catamenia. Each attack is generally preceded by rigors. Pure blood is seldom vomited, unless caused by internal violence or corrosion of the vessels of the stomach. The blood seldom coagulates, and seems to be the product of passive hemorrhage, or exudation from the minute vessels of the mucous membrane.

The diagnostic symptom of hemorrhage from the stomach is a sense of weight and pain in that region, unaccompanied by cough. Every part of the mucous membrane of the alimentary canal is perhaps equally liable to passive hemorrhagic exudation.

Occasionally the disease is so general as to give rise to a sanguineous cholera. In some instances it is confined to the bowels, the stomach not participating in it. The most alarming intestinal hemorrhage is called mclæna, and is characterized sometimes by full discharges of black blood, resembling ink mixed with sand; but at others, it is more of a sanguineous character. Hemorrhage from the stomach

and bowels produces great exhaustion, and unless relieved, soon proves fatal. This disease frequently accompanies some form of fever, especially typhoid fever. When the hemorrhage is from the stomach, it is a less fatal symptom than when it occurs from the bowels; yet it rapidly exhausts the patient, and frequently proves disastrous, unless timely relief is given.

TREATMENT.

In hemorrhage from the stomach or bowels, an infusion of matico, in connection with the ligatures, and hot turpentine and mustard sinapisms, will generally give relief. If the patient is an adult, give two or three tablespoonfuls of a strong tea, made of the matico leaves, every five minutes. At the same time apply the ligatures to the arms and legs; also, a sinapism over the stomach or bowels, as the case may be, made by taking one tablespoonful of mustard, four tablespoonfuls of pulverized slippery elm, and one of oil of turpentine, mixed with hot water, and applied as warm as the patient will bear it. The matico tea should be continued until the hemorrhage ceases, or for one or two hours. If it proves ineffectual, a pill may be given, made as follows:

R Nitrate of Silver gr. j.
 Geranin gr. x.
 Pulv. Gum Arabic gr. xxx.

Triturate, and make sixteen pills. Give one every half hour while the hemorrhage continues. After which the patient's strength should be well supported by vegetable tonics, iron, and a generous diet. If the hemorrhage should be owing to a suppression of the catamenia, the feet should be immediately placed in a tub of warm water, and a large Galbanum plaster applied along the spine and across the lower portion of the abdomen. Also, ten or fifteen drops of the oil of Erigeron should be given every

fifteen minutes, until the hemorrhage ceases. After which the patient should be treated as directed under derangement of the menses.

JAUNDICE, OR YELLOWNESS.

This appearance is owing to the deposit of the coloring matter of the bile in the skin and other tissues and fluids. This substance must be presumed to exist in the blood of the jaundiced patient, and it is claimed to be found in healthy blood. But the prevalent belief is that the bile-pigment is absorbed after having been secreted by the liver: an opinion founded upon the most common cause of jaundice, *i. e.*, the obstruction of the *ductus communis*, or one or more of the branches of the hepatic duct, by a gall stone, or by the pressure of a tumor, &c. But among the most common causes of jaundice is a deficiency of the secreting cells of the liver; consequently no biliary secretion takes place. Jaundice is considered by some as an idiopathic disease, but it is mostly a symptom of some specific difficulty, and for which it serves as a diagnostic symptom. It is a phenomenon of several fevers, *viz.*: bilious remittent and yellow; also of different affections of the liver, gall-ducts, and stomach. When it comes on with indigestion, slight fever, sluggishness, and pain in the hypochondrium, it may be regarded as a functional disease of the liver and stomach. But when it follows violent and spasmodic pain in the region of the liver, it is dependent upon the arrest of gall-stone in the biliary passage. When it precedes delirium or coma and convulsions, it indicates disorganization of the hepatic cells; and when it comes on slowly and lasts a long time, and acquires a dark tinge, it depends either upon organic disease of the liver, or some of the neighboring organs obstructing the discharge of bile into the duodenum. The symptoms of

jaundice, excepting the yellowness, depend much upon the cause of the difficulty, though in all cases the skin is husky and dry; the urine partakes of the color of the skin; the fæces are either of a dough or grey-ash color, and in most cases there is constipation of the bowels. The other symptoms vary in different cases.

TREATMENT.

The treatment of this disease should depend entirely upon its cause as indicated by the symptoms connected with it. If it depends upon a functional disorder of the liver, the following compound may be given :

Euonymine	gr. x.
Podophyllin	gr. ij.
Gelsemin	gr. j.
White Sugar	gr. xxx.

Mix, triturate, divide into six powders, and take one every two hours. After which —

R Phytolaccin	gr. vj.
Flour of Sulphur	gr. xxx.
Extract Dandelion	ʒj.

Make twenty pills, and take one four times a day. The surface should be freely bathed, and the diet should be easy of digestion. After the pills are taken, the following may be given :

R Cream of Tartar	ʒij.
Sanguinarin	gr. x.
Sulphur	gr. xx.
Iron by Hydrogen	gr. xx.
Best Gin	Oj.

Mix, and take one tablespoonful three times a-day. When the disease is dependent upon the arrest of gall-stone in the biliary passage, a thorough Lobelia emetic should be given, followed by a spirit-sweat and a brisk purgative, as follows :

R Podophyllin	gr. ij.
Cream of Tartar	gr. x.
Gelsemin	gr. ss.

Mix, triturate, and divide into four powders, and give one every two hours until it operates as a cathartic.

If the above prescriptions fail to give relief, they should be repeated at proper intervals.

DISEASES OF THE HEART.

The most common disease of this organ is fluttering or palpitation. This may be connected with various structural changes in the organ, yet it frequently exists independent of any such change. "The distinction between organic and functional disease of the heart," says Dr. Walshe, "is far from being easily made. Many of the general rules given for this purpose fail clinically." The inconstancy of functional and the constancy of organic ailment are strongly dwelt upon for examples. But all the subjective and many of the objective symptoms may disappear temporarily in cases of extensive organic disease. The existence of secondary changes, such as sub-cutaneous œdema, congestion of the lungs, &c., commonly proves the cardiac affection to be organic, but not always; for spanæmia, added to nervous palpitation, may induce œdema. If exercise relieves a disturbed condition of the heart, its affection is pronounced to be dynamic only; but if spanæmia exist, exercise may be unbearable. From these remarks of Dr. Walshe, it will be perceived that without much care, functional and organic disease of the heart are liable to be confounded. Indeed, nothing was more common than this, previous to the discovery of physical diagnosis and their complete elucidation by Laennec. And now, without repeated physical examinations, even an adept in this method

of diagnosis may mistake mere irregularity of rhythm for structural cardiac disease; as it is now universally admitted that palpitation, when connected with spanæmia, will not only produce a basic systolic murmur, but a systolic murmur at the mitral apex may be generated by the irregular action of the muscoli papillaries, and even the area of dulness may be extended temporarily, owing to the distension of the cavity of the heart with blood.

SYMPTOMS OF DYNAMIC PALPITATION.

According to Laennec, the first impression conveyed by the stethoscope is, that the heart is not enlarged. The sound is not heard loudly over a great extent, but this depends very much upon the thickness of the chest. Laennec states that in nervous palpitation of the heart, the heat of the patient is never sensibly elevated by the increased action of the heart, which is the case in organic disease of this organ. This may be true as a general rule, but is far from being universally so, as my own professional experience has proved. Dr. Walshe states that in nervous affections of the heart, the area of dulness remains unaltered; but that distension to the right of the sternum may occur in prolonged paroxysms. He states also that the first sound is too loud and clear at the mitral apex, and somewhat abrupt and short. The sound is duller and less clicking than is natural at the mid-sternal base. The first sound may be loud enough to be audible both to the patient and to the bystanders at a distance of some inches from the chest. Reduplication of the second sound at the base is common; and a clear metallic ring or a præcordial rub may accompany the shock at the mitral apex.

Prof. Calkins remarks, that in order to form a correct diagnosis, we should recollect that the character of organic disease of the heart is to progress; that of functional to occur at regular intervals; that active exercise almost

invariably aggravates organic, but seldom increases the symptoms of functional; that the physical signs generally are soon developed, and remain permanent in organic, while they seldom exist—and when they do, they arise from chlorosis—in functional. The rational symptoms, which more frequently occur in nervous disease of the heart, than in functional, are choking in the throat, precordial anxiety, with faintness and actual syncope, or active pains simulating angina. The pulse beats with increased frequency, and there is a clammy coldness of the extremities, with a flushed face. The fits of palpitation may last for a few minutes, or they may last for hours, or even days.

TREATMENT.

During the paroxysms, the remedies should be of such character as to lessen their intensity, and, if possible, at the same time to remove the cause. If this cannot be done, the paroxysm should be relieved, and an effort made to remove the cause afterwards. For the purpose of relieving the paroxysm,

R Gelsemin.....	gr. j.
Scutellarin	gr. x.
Cypripedin.....	gr. xv.
White Sugar.....	gr. xxx.

Mix, triturate; divide into eight powders, and give one every hour until the paroxysm is relieved. At the same time, the feet should be bathed in warm water, and the patient should avoid all mental and bodily excitement. After which, if there is spanæmia,

R Quinine.....	gr. x.
Iron by Hydrogen	gr. xij.
Hydrastin.....	gr. xj.
White Sugar	gr. xxx.

Mix, triturate; divide into ten powders, and give one three times a day. The diet should be generous, and the following tonic should succeed the powders:

R Scutellarin.....	gr. xx.
Precipitated Carbonate of Iron.....	gr. xxx.
Caulophyllin	ʒj.
White Sugar	lbss.

Mix, triturate; add to one pint of good port wine, and take one tablespoonful three times a day before eating. The bowels should be kept in a free state by the use of Leptandrin and Neutralizing Mixture, and the patient should avoid all undue exercise.

ANGINA PECTORIS.

This is a disease characterized by paroxysmal pains and tenderness in the precordial region, extending to the head, shoulders, arms and legs, and in some cases producing numbness. The pain is sudden in its onset, but is mostly of a dull character, although in some cases it is lancinating or tearing, producing exquisite torture and contractive suffocation. There may be slight dyspnœa or orthopnœa, with lividity of the countenance. The heart usually palpitates, the extremities become cold, the urine is passed in large quantities, and is mostly of a limpid appearance. The bowels are constipated, and in most cases there is more or less constitutional disturbance for some time previous to the attack. If there are cardiac murmurs in connection with the disease, there is reason to apprehend that it is connected with some organic difficulty of the heart. This disease may be a pure neuralgic affection of that organ, accompanied by hysteria and anæmia, or it may be of a periodic character, of miasmatic origin,—a mere masked ague—or it may depend upon some organic disease of the heart.

TREATMENT.

In this affection, the first object should be to relieve the urgent symptoms. For this purpose, the feet should be placed in hot water, a large sinapism applied over the region of the heart, and the patient caused to take one drop of Aconite every five minutes until the symptoms are relieved. If they are not relieved in the course of half an hour, the following compound should be given :

℞ Lobelin..... gr. j.
 Lupulin gr. vj.
 Hyosciamin gr. ij.
 White Sugar..... gr. xxx.

Mix, divide into ten powders, and give one every ten minutes until relief is obtained. As soon as the severity of the paroxysm is relieved, the cause of the disease should be ascertained, and such a course pursued as will effect a permanent cure. Antiperiodics should be given where the disease is produced by miasm, chalybeates and tonics where it is dependent upon anæmia, and if it originates in organic disease of the heart, the proper treatment may be found under that head.

CONGESTION, OR ACCUMULATION OF BLOOD IN THE CAVITIES OF THE HEART.

Congestion, or accumulation of blood in the cavities of the heart, may occur in consequence of fibrinous deposits interfering with the free movement of the valves. This deposit seems mostly to be a product of endocarditis, although it may arise from regurgitation during fits of dyspnœa, and whenever there is sudden obstruction of the circulation through the lungs.

SYMPTOMS.

These are orthopnœa, cough, lividity of the countenance, oppression and anxiety. The physical signs are extended area of dulness, irregular rhythm and a labored impulse of the heart. Dropsical effusions and anæmia are frequently produced by this disease.

TREATMENT.

Give a free purgative of Podophyllin and Cream of Tartar, followed by Syrup of Marshmallow and Iodide of Potassium. If the disease proves obstinate, an irritating plaster should be placed over the region of the heart, and allowed to remain until a free discharge ensues. Aconite should be given to control the circulation, and the diet should be nutritious.

PERICARDITIS, OR INFLAMMATION OF THE PERICARDIUM.

The symptoms of this disease depend much upon the state of the inflammation, during the first stage of the inflammatory process. There is more or less fever, with increased frequency of the pulse, cough and dyspnœa. The physical sign is a sound of grating friction. In the second stage, which is that of exudation, there is pain in the region of the heart, irregular pulse, anxiety, dyspnœa, cough, and a tendency to syncope. The features are sharp, and indicate distress. There is scanty and high-colored urine, with alternate fever and apyrexia.

The physical signs are frictional sound, and valvular murmurs, dependent upon endocarditis. In the third stage, bulging of the precordial region may be observed, and if there is extensive effusion, displacement of the apex

of the heart upwards. The area of dulness will be changed, and very materially enlarged. The sound of the heart will be indistinct and muffled. If adhesion of the pericardial surface to the heart should occur, the action of the heart will be tremulous and unsteady. As the disease advances, the head is kept elevated, orthopnoea is a constant symptom, and the patient dreads movement of any kind. In fatal cases *risus sardonius* often occurs, with tenderness of the Epigastrium, Spasmodic dysphagia, nausea, and vomiting, quasimania, stupor, and death. Or the severity of the symptoms may gradually yield, and the patient recover.

CAUSE.

This disease may be caused by metastasis of inflammation from other parts, as in pleuritis, pneumonia, rheumatism, phlebitis, &c., and in some cases it is said to be idiopathic.

TREATMENT.

In the first stage of this disease, the bowels should be opened by full doses of Podophyllin and Cream of Tartar, a warm sinapism should be applied over the region of the heart, and the surface thoroughly bathed in lye water and whiskey. The operation of the cathartic should be followed by from one to five drops of the Tinct. of Aconite every hour, until free diaphoresis ensues. This course will control the active form of the inflammation, after which the patient should take the following diuretic and alterative mixture :

R Syrup of Marshmallow..... ℥v.
Iodide of Potassium..... ℥ss.

Mix, and give one teaspoonful every three hours. At the same time, give from five to ten drops of the Muriated

Tinct. of Iron every five hours. If the disease should be of a periodic character, from five to ten grains of the Sulphate of Cinchonin, and one-eighth of a grain of Gelsemin should be given every three or four hours until that symptom is controlled. If extensive effusion should occur, from one-eighth to one-fourth of a grain of Phytolaccin to the Syrup of Potassa and Marshmallow, may be added. If, after the active symptoms of the disease, there should still remain some cardial disturbances, the acetic syrup of Sanguinaria will generally suffice to control them.

ENDOCARDITIS.

The symptoms of this disease are pain and uneasiness in the region of the heart, with precordial pressure. The decubitis is dorsal. The skin is hot, the countenance is livid, and there is cough, dyspnœa, and tendency to syncope. The physical signs are uneasiness, and increase of the action of the heart, and a grating accompanying the bellows sound. The normal systolic murmurs will be changed, corresponding to the stage of the disease.

TREATMENT.

The treatment of endocarditis, is essentially the same as in pericarditis. The surface should be bathed in lye water, a warm pack applied over the cardiac region, and Aconite or veratrum given until the active stage of the disease is removed. These should be followed by diuretics, alteratives, and tonics.

CARDITIS, OR INFLAMMATION OF THE SUBSTANCE OF THE HEART.

This disease is mostly connected with endocarditis or pericarditis, and even when it exists as an idiopathic disease, its symptoms are so closely allied to them that as yet the diagnostic symptoms are very obscure. The treatment should be the same as of inflammation of its membranes.

ATROPHY OF THE HEART.

In valvular atrophy, says Dr. Walshe, when the chordæ tendinæ of the mitral valve are shortened or extremely thin, they are probably purely atrophous; the large tongue of the valve is simply defective in size, without obvious puckering, or other evidence of past inflammation: in either case regurgitation may occur. The sigmoid and pulmonary valves may also become atrophous, causing regurgitation in the aorta and pulmonary veins; in the former producing syncope, in the latter asphyxia.

The physical signs are regurgitation with bellows sound. Where there is atrophy of the parenchyma of the heart, the area of dulness will be diminished, and the diastole and systole will both be feeble.

The rational symptoms are pallor, coldness of the extremities, cough, irregular respiration, palpitation, precordial oppression, œdema of the extremities, and in females, irregularities of the catamenia, hæmoptysis, and it frequently terminates in dropsy and phthisis. In old age, the valves of the heart becoming atrophied, frequently causes pulmonary apoplexy.

TREATMENT.

The patient should avoid all excesses, in mental and bodily exercise. The diet should consist of rich animal broths, with a liberal amount of fats and sugar. Give the following compound :

R Precipitated Carbonate of Iron.....	3j.
Hydrastin	3ij.
White Sugar.....	3iij.
Port Wine	Oj.
Water.....	Oss.

Dose, one tablespoonful three times a day. If there is much irregularity in the action of the heart, one grain of Myricin, and one-sixteenth of a grain of Veratrin, given twice or three times a day, will usually give relief. In old age, much benefit is sometimes derived from a moderate quantity of malt liquor once or twice a day.

HYPERTROPHY OF THE HEART.

By this disease, is understood thickening of one or more of the cavities of the heart. It may exist with, or without other affections of this organ. The difficulties with which it is most frequently connected are dilatation and ossification of the valves. It is said that hypertrophy is mostly confined to the ventricles, and that it is more commonly met with in the left ventricle, than the right. This may sometimes be true, yet, in my practice, it is far from being generally so ; as in some thirty cases of both complicated and uncomplicated hypertrophy, the majority occurred in the auricles. Hypertrophy of the heart may be caused by a preternatural determination of blood to the organ, from a latent form of inflammation, or it may arise from a long-continued increase of action dependent upon nervous disease.

SYMPTOMS.

The symptoms of hypertrophy of the left ventricle are a sensible, constant increase of the action of the heart; the pulse strong, full, and vibrating. On percussion the area of dulness is extended; and on auscultating the chest, the sound of the heart will be found very much enfeebled, and if hypertrophy is connected with dilatation, the diastole will be materially prolonged. In this way we may be enabled to distinguish between simple hypertrophy and that accompanied with increase in the capacity of the cavity. In hypertrophy of the right ventricle, the signs are very nearly the same as above, except the shock of the heart's action will be felt at the base of the sternum, instead of between the fifth and sixth ribs, as in hypertrophy of the left side.

In hypertrophy of the ventricles, the impulse will be much increased, and the systole shortened in duration, while the diastole will be prolonged. The diseases produced by these cardiac derangements are: dropsy, hæmoptysis, asthma, tubercles, phthisis, and asphyxia.

TREATMENT.

In treatment of hypertrophy of the whole or different portions of the heart, all stimulating articles of food and drink should be avoided, as also the use of tobacco. To lessen the action of the heart, and thereby prevent the abnormal supply of nutrition, is another essential element of the treatment. For this purpose a sufficient amount of Tet. Veratrum Viride may be given, say from five to ten drops three or four times a-day. The pulse should be maintained at about fifty-five or sixty by the use of the Veratrum. At the same time one teaspoonful of the solution of Iodide of Potassium should be taken three times a-day. If the disease proves persistent, and should not yield to this plan of treat-

ment, from one-eighth to one-fourth of a grain of *Phytolaccin* may be given every night at bed-time. The bowels should be moved once or twice a-week, with *Podophyllin* and Cream of Tartar, and the patient should avoid all mental and bodily excitement.

DILATATION, OR ENLARGEMENT OF THE CAVITIES OF THE HEART.

Dilatation may be confined to one cavity of the heart, or it may extend to all. The cause of this disease, says Dr. Bertin, is owing to some obstruction in the circulation of the blood, as diseases of the valves, &c., while Laennec attributes it to congenital disproportion in the parts of the heart. But what is a more common cause of the disease in this country is an impoverished state of the blood, producing a weak and lax state of the muscles, thus giving rise to dilatation.

SYMPTOMS.

The patient is often attacked with violent dyspnoea and palpitation, followed by a weak and feeble pulse; tendency to syncope, and in some cases nausea and vomiting. The bowels are mostly constipated, and there is frequently pain and præcordial pressure. According to Laennec, the most constant and characteristic sign of this disease is a swollen state of the jugular veins without pulsation.

TREATMENT.

The principal classes of medicines indicated in this disease are tonics and astringents, such as *Hydrastin*, *Macrotin*, *Myricin*, and *Muriated Tincture of Iron*. The diet should be full and nutritious, and the patient allowed to drink porter or ale once or twice a-day, with his meals. The *Muriated Tincture of Iron* should be taken in from

five to ten drop doses three or four times a day in a small quantity of beef tea or starch water. The Macrotin, Myricin, and Hydrastin, should be used in the form of a syrup two or three times a-day.

PHLEBITIS AND PHLEGMASIA DOLENS.

Phlebitis is inflammation of the inner membrane of a vein. It may occur as the effects of blood-letting, the application of ligatures, pressure upon some venous trunk, &c. The pathological effects of inflammation of the veins vary according to the extent and severity of the inflammation. In most cases the affected vein is swollen, thickened, and indurated to such a degree as to very much resemble an artery. A diffused swelling, connected with acute pain, coated tongue, scanty urine, constipated bowels, and pyrexia, are among the prominent symptoms of this disease. Upon examination, the adipose, cellular, and subcutaneous tissues are found to be filled with fluid; and when the parts are laid open, clots of blood and lymph are found adhering to the inner coats of the veins. If the inflammatory process continues, the clots of blood and lymph are converted into purulent matter, rupturing the vessels, and forming a deep phlegmonoid abscess in the adjacent tissue.

Phlegmasia Dolens is an inflammation of the veins of the leg, mostly caused by pressure of the gravid uterus, upon the iliac and other veins, generally making its appearance on the second or third week after delivery. It occurs for the most part in one leg, exhibiting to the touch numerous irregular prominences under the skin.

SYMPTOMS.

In the course of two or three weeks after confinement, pain and uneasiness are complained of in the hypogastric,

lumbar and inguinal regions. On examining the limb, it will be found tense, elastic and shining, mostly painful to the touch. It will also be flexed.

The skin will be hot, the pulse quick, with great thirst and restlessness. If the disease is allowed to advance, the tongue will be covered with a dark sordes, the respiration becomes hurried, and delirium, coma, and death, rapidly follow. Or the symptoms will continue in a mild form for weeks, or even months, and the patient recovers, but with a shattered constitution.

The above are the most ordinary symptoms, yet they vary exceedingly in different cases. Sometimes the pain commences in the knee, and is of a sharp darting character, extending to the groin. The limb is but slightly swollen, and cold, but has a peculiar glistening appearance. The secretions of milk will be interrupted, and the bowels irregular. At other times the disease will assume a decided periodic character. The symptoms, such as pain, redness and fever, will all become exceedingly aggravated, at a certain stated period, and remain so for a few hours, followed by a distinct remission; or the disease may be transferred to other organs, as the peritoneum, pleura, or lungs, producing extensive organic disease of those organs.

TREATMENT.

The treatment of phlebitis, when it is traumatic, consists in the application of warm emollient poultices, as slippery elm, saleratus and myrrh, kept moist with the Tinct. of Arnica, and the administration of brisk purgatives of Podophyllin and Cream of Tartar, or Cream of Tartar and antibilious physic, succeeded by a mixture as follows :

R Muriated Tinct. of Iron.....	$\overline{3}$ ss.
Pure Water..	$\overline{3}$ vi.
Sulphate of Cinchonin.....	$\overline{3}$ ss.

Mix, and give one teaspoonful five or six times a day. If there is fever, Aconite or Veratrum should be given to control it. The purgative should be repeated as often as indicated. After the swelling is subdued, the limb should be evenly bandaged, and kept wet with the Tinet. of Lobelia.

In Phlegmasia Dolens, the poultice should be applied with a bandage over it. A purgative should be given similar to that in traumatic phlebitis, succeeded by the following compound :

R Sulphate of Bebeerine..... gr. xxx.
 Caulophyllin gr. xj.
 White Sugar..... gr. xxx.

Mix, triturate; divide into ten powders, and give one every three hours. Aconite may be given to control the fever, and the back, hips, and lower part of the bowels be bathed in a liniment prepared as follows :

R Oil of Turpentine..... ℥j.
 Eggs..... v.
 Common Salt ℥ss.

Mix, and use two or three times a day. If the disease should assume a periodic character,

R Muriated Tinct. of Iron..... ℥ss.
 Water ℥ij.
 Quinine gr. xx.

Give one teaspoonful every three or four hours. The surface should be thoroughly bathed, and if practicable, a spirit-sweat given once or twice a week. When the active stage of the disease has passed, small doses of Carbonate of Iron, with Euonymine, may be given three or four times a day. If there should be a chronic diseased condition of the vessels of the limb, the bandage should be continued, and kept moist by vegetable astringents. The patient

should also take Iodide of Potassium in connection with tonics. The diet should be full and nutritious, and entire rest should be enjoined.

CYANOSIS, MORBUS CÆRULEUS, OR BLUE SKIN DISEASE.

This disease is confined to infants. The symptoms are a peculiar livid or blue appearance of the skin, frequently extending to the mucous membrane of the mouth. There is constant cough, dyspnœa, and palpitation. In some cases the dyspnœa becomes so excessive, as to produce syncope and death.

The causes of these symptoms have been shown by Dr. Gintrae, to be as follows :

In 22 cases, the aorta was found to arise from both ventricles.

- | | | |
|------|---|--|
| “ 30 | “ | the foramen ovale was open. |
| “ 14 | “ | the ductus arteriosus was open. |
| “ 4 | “ | a single heart with one auricle and ventricle. |
| “ 5 | “ | the ventricular septum was imperfect. |
| “ 22 | “ | the pulmonary artery was contracted. |
| “ 5 | “ | the pulmonary artery was obliterated. |
| “ 1 | “ | the aorta was obliterated. |
| “ 4 | “ | the aorta arose from the right ventricle. |

The above table shows that this disease is mostly dependent upon congenital deformities of the heart and its appendages.

TREATMENT.

But little can be done in the treatment of this disease, more than to give temporary relief. Where there is syncope, the child should be placed in a warm bath, and ammonia or camphor applied to its nostrils. After which it should be wiped dry, and wrapped in a warm flannel.

For the cough one or two drops of the Tinct. of Lobelia should be given in a teaspoonful of breast milk. The action of the heart may be regulated by Aconite, and in some cases, where the deformity is only partial, the child will gradually recover.

HEADACHE.

This is frequently a mere symptom of idiopathic disease, yet we often meet with cases where the difficulty constitutes the only perceptible ailment. Headache may be caused by a preternatural determination of blood to the brain, by the too frequent use of intoxicating liquors, by a disordered condition of the stomach and bowels, by a loss of balance between the venous and arterial circulation, by an injudicious use of tea and coffee, undue mental or bodily exertion, imperfect menstruation, and the too frequent use of purgative medicines. It is also a symptom of most Idiopathic fevers, as well as most other acute diseases.

TREATMENT.

When headache is dependent upon over-exertion of the mind or body, add one-half grain of Belladonna to one-half tumbler full of water, and give one teaspoonful every fifteen minutes, until the pain ceases. If dependent upon constipation of the bowels, mix one ounce of neutralizing mixture and one grain of Podophyllin, and take one or two teaspoonfuls a-day, or a quantity sufficient to keep the bowels in a soluble condition. If upon imperfect menstruation :

R Macrotin..... gr. vj.
 Vallet's ferruginous mass..... gr. xxx.

Mix, make twelve pills, and take one every night. Where the headache depends upon eating and drinking more than nature requires, this should be carefully corrected.

CONVULSIONS IN ADULTS AND CHILDREN.

When convulsions occur in adolescence, it may indicate inflammation of the brain, plethora, or anæmia, ossification of the arteries of the brain, growth of tumors on the inner table of the skull, &c. When they occur in children, although frequently arising from disease of the brain and spinal marrow, they are nevertheless produced, in a great majority of cases, from irritation, transmitted to these parts, from the digestive organs.

TREATMENT.

When the disease occurs in adults, the treatment depends principally upon the cause. Although during the convulsions, small doses of equal parts of the Tinct. of Lobelia and Scutellaria, should be frequently administered into the stomach, if practicable; otherwise mixed with starch water, and given in the form of an enema. The circulation should be equalized by hot baths, sinapisms to the calves of the legs, feet, &c.

When thus relieved, the patient should be treated according to the cause. Where children are seized with convulsions, the first object should be to evacuate the stomach and bowels. For this purpose, four or five drops of the compound Tinct. of Lobelia should be given, every five or ten minutes, until the stomach is thoroughly evacuated. At the same time, the bowels should be injected with equal parts of warm water, oil of olives, and molasses. The child should be placed in a warm bath during the action of the emetic and injection. When the child has been relieved by the above course, all irritating food should be carefully avoided, and a weak tea of Hydrastin and ginger, well sweetened, should be given occasionally for the purpose of giving tone to the stomach.

NEURALGIA.

Neuralgia has alternately been classified under the head of surgical and medical disease. But from the almost universal failure of surgical practice to relieve it, this disease is now almost generally treated as belonging to the medical department.

There is yet, however, some difference of opinion with respect to its pathology. Prof. Jones and others regard it as but a form of ague; while Craigie and others consider it to have its seat in an inflammation of the neurilema or covering of the nerve. Dr. McIntosh states that the cause of this disease may frequently be traced to a disordered state of the stomach, and alimentary canal. Dr. Elliotson in the 3d volume of the *Cyclopedia of practical medicine*, p. 388, states that the nature of neuralgic affections may be evident immediately, or, not till after a lapse of time; may become evident after death only, or, may never be discovered. He further states that inflammatory conditions of the nerves, and structural changes, as well as mechanical causes, may be detected during life, if the seat of these conditions is within the reach of observation; and symptoms may be induced, which clearly point out the inflammation or structural changes, even if those should be beyond our observation.

Occasionally, however, the seat and cause of the irritation is not only beyond our reach during life, though discoverable afterwards, but no symptoms are produced which indicate them. From the above remarks, and many other observations which might be made, we perceive that quite a diversity of opinion exists relative to its pathology. In order to harmonize the conflicting theories, resulting as they do from actual observation, we might conclude that occasionally it has its origin in inflammation of the membranes of the nerves, in spinal irritation, in derangement

of the stomach and bowels, and in affections of the kidneys ; also, that it frequently arises as one of the effects of miasm, and assumes a disguised remittent character.

SYMPTOMS.

In the most aggravated form the pain is lancinating or tearing, as the patient expresses it. It is sharper at some times than others, and in some instances the parts become red, and assume the appearance of inflammation, although this is not generally the case. When this disease attacks the nerves of the face, it is called *Tic Doloureux*.

All the soft tissues seem to be liable to this affection. The attacks are mostly sudden, and last from a few hours to several days. The constitutional symptoms connected with them are frequently very slight, although, in some cases, the pulse becomes quick, the urine scanty and high-colored ; a light brown coat will appear on the tongue, and there will be alternate fever and perspiration. In other cases the paroxysms will commence with rigors and chills, followed by fever and perspiration ; in short, manifesting all the essential symptoms of ague.

TREATMENT.

As this disease is decidedly of an intermittent character, where there is no obvious organic lesion or perceptible cause of the disease, the treatment should be commenced by giving full doses of antiperiodics, such as the following :

R Scutellarin	gr. x.
Cypripedin	gr. v.
Quinine	gr. x.
Prussiate of Iron.....	gr. xij.

Mix, triturate, divide into ten powders, and give one every two hours, till all are taken. At the same time the affected parts should be thoroughly bathed in a strong, hot solution

of Ferrocyanide of Potassium. These applications should be made in the form of fomentations, and changed as often as cold. When the antiperiodic powders are all taken, the bowels should be thoroughly evacuated by the use of antibilious physic and Leptandrin. If the above prescription be not sufficient to remove the disease, give the following :

R Tinct. of Gelseminum	℥ij.
“ Macrotys Racemosa	℥j.
“ Iodine	℥ss.

Mix, and give three drops every three hours, until the symptoms yield. If there should be a tendency to a periodic return of the disease, the antiperiodic powders should be repeated from time to time. The bowels should be kept in a natural condition by the use of Neutralizing mixture, and as often as once or twice a week, the surface should be thoroughly bathed. Where the disease is dependent upon spinal irritation, in addition to the above mentioned causes, an irritating plaster should be placed along the spine, and remain until a free discharge ensues. Where there is derangement of the menses, Senecine and Bebeerine should also be used as circumstances seem to indicate.

HYSTERIA.

This is a disease of the nervous system, and almost wholly confined to females, although it is said that males are not exempt from it. The invasion of the disease is sudden and irregular, but in many cases decidedly periodical. In slight attacks the patient bursts into a fit of weeping, soon followed by convulsive laughter, which lasts for a longer or shorter time, and may be followed by comparative composure.

In more severe cases, the complaint is ushered in by a sharp pain in the abdomen or chest, which is soon followed

by a sense of suffocation and oppression at the Epigastrium. The bowels are tense and the surface is cold. The countenance varies; in some cases it is red and swollen, in others it is pale, and the features are contracted. In some very severe cases, there is a convulsive affection of the muscles, amounting to clonic spasms. The urine is mostly discharged in large quantities, and has a light limpid appearance.

CAUSES.

We seldom meet with this disease before puberty, or after the period of life when menstruation finally ceases, and as it mostly makes its appearance during the catamenial flow, it is supposed to have its origin mostly in deranged uterine action.

TREATMENT.

During the paroxysms, the feet should be placed in warm water, and a hot sinapism applied to the lower part of the abdomen. The patient should take equal parts of Cypripedin and Scutellarin, one grain every half hour until the paroxysms subside. If the above is not sufficient to control the disease, the compound ginger and Bayberry tea may be given freely, followed by ten or twenty of Beach's sudorific drops, or thirty or forty drops of the Tinct. of Castor, followed by a pill of assafœtida. After the paroxysm, the patient should take from five to ten grains of Bebeerine, and the same amount of phosphate of Iron, every day for two or three weeks.

To remove the uterine affection, Macroton, Caulophyllin and Senecin should be used, as the nature of the case seems to indicate. When the disease is dependent upon indigestion and constipation of the bowels, tonics and laxatives are the remedies. If upon spinal irritation, the proper treatment will be found under that head.

MYELITIS, OR INFLAMMATION AND IRRITATION OF THE SPINAL MARROW.

The symptoms of this disease are a sharp pain up and down the back, rigors, fever, headache, and not unfrequently delirium and coma. In some cases dysuria occurs, in others retention of the urine. Rigidity of the muscles of the back and neck is almost a constant symptom. The body may be bent backwards, *opisthotonos*, or forwards, *emprosthotonos*, or there may be a simple rigid state of the muscles, and the decubitis normal. In other cases there may be tetanus, convulsions, or paralysis. The muscles of deglutition are often so affected as to occasion much difficulty of swallowing. The pulse is mostly hard and quick, the bowels are extremely constipated, and frequently there is nausea and vomiting. The respiration is slow and irregular, and occasionally death is suddenly produced by asphyxia.

PROGNOSIS.

The prognosis of this disease is usually favorable under the eclectic system, if it receives timely treatment.

TREATMENT.

A sinapism should be applied along the spine, and the feet should be placed in warm water. The patient placed upon the Tinct. of Veratrum Viride, if of a plethoric habit; if otherwise, Aconite should be given, and the following cathartic may be administered :

R Cream of Tartar..... gr. xx.
Podophyllin gr. iij.
Capsicum gr. x.

Mix, triturate; divide into six powders, and give one every hour until a cathartic effect is produced. The powders

should be assisted in their action by warm stimulating enema. If the disease still proves persistent, a spirit-vapor bath should be given, followed by an emetic of the acetic tincture of Lobelia and Sanguinaria, also repeat the cathartic and continue the sinapism to the spine. If there should be muscular spasms, give the fluid extract of Lobelia, Cypripedin and Scutellaria, equal parts, from five to ten drops every half hour until that symptom subsides. After the active stage of the disease is passed, to prevent disorganization of the spinal marrow and its membranes, with its consequences, such as paralysis, &c., a full antiperiodic course of medicine should be given, followed by two or three drops of the Tinct. of Phosphorus once or twice a day. The bowels should be kept open, and the system supported by the liberal use of Hydrastin and Euonymine.

SPINAL IRRITATION.

This affection might be more properly designated as chronic inflammation of the spinal marrow, and its membranes. In fact the various morbid changes observable as the symptoms of what is usually designated spinal irritation, such as softening, effusion, hypertrophy, &c., all clearly indicate the previous existence of a latent inflammatory process.

SYMPTOMS.

Says Prof. J. G. Jones: "The proteian manifestations of spinal irritation, and the great liability that exists to mistake some of the numerous disturbances produced by disease seated in the spinal nerves, for other and more serious organic affections, remote from the source of trouble, renders the consideration of this subject scarcely less important to the student of medicine, than that of any other

topic connected with disease. Scarcely an organ in the body can be found that is not by turns made the scapegoat upon which these great nervous centres play off their fantastic representations of serious organic or functional disturbances, and thereby mislead the unsuspecting attendant, at the expense to the patient, of a severe course of medication directed to disease having its real seat far remote from the organ manifesting embarrassment and functional disturbance." It will be perceived by these remarks of Prof. Jones, that irritation of the spinal marrow assumes a great variety of symptoms, which is actually the case.

Not unfrequently females who are troubled with the latent form of spinal affection, exhibit symptoms of uterine derangement, heart disturbances, irritation of the lungs and bronchi, irregularity of the bowels, neuralgic pains, &c., succeeding each other in a rapid series of changes. The diagnosis must be made up, in these cases, by carefully examining each organ, thus sympathetically affected, by itself; and, in the absence of any serious organic disease, together with the extreme nervousness of the patient, it will enable us to arrive at the true source of the complaint. On pressure of the spinal processes, there will generally be found more or less tenderness, although I have seen quite a number of cases of evident spinal irritation where this symptom was not present.

TREATMENT.

In cases of spinal irritation, the irritating plaster should be applied along the diseased part of the spine, and caused to remain until a free discharge ensues, and the following tonic and alterative given :

R Phosphate of Iron	gr. xxx.
Scutellarin.....	gr. xx.
Syrup of Iodide of Potassium	℥ij.
Port Wine	Oj.

Mix, and give one tablespoonful three times a day. The surface should be bathed in warm or cold water, as indicated, twice or three times a week; and the bowels should be kept regular by the use of small doses of Neutralizing mixture. When the above course has been pursued for some time, and the disease is not removed, the following compound may be given:

R Valerianate of Quinine	gr. xx.
Cypripedin	gr. x.
Sanguinarin	gr. xx.
White Sugar	℥ss.

Mix, triturate, and give ten grains four or five times a day. Also, bathe the surface in a warm solution of Ferrocyanide of Potassium every morning. If there is Leucorrhœa connected with the spinal difficulty, Macrotin and Caulophyllin should be given in addition to the above.

HYPOCHONDRIASIS.

The symptoms of this disease are exceedingly various, and are both imaginary and real. The imaginary ones are numerous, such as want of sleep, constipation of the bowels, inability to sleep, &c. Nothing is more common than to hear the patient state that he has been unable to close his eyes in sleep for several nights, when the fact is that he has slept regularly. Or that the bowels have not moved for days, or even weeks, when they are perfectly regular. Or there may be a great variety of imaginary difficulties at the same time. The complaints of one individual that I treated for this disease will serve to illustrate the imaginary symptoms of this class of cases: The patient was a male about 45 years of age. He first complained of inability to walk, and accordingly took to his bed. He was soon unable to speak above a whisper, and imagined he was laboring under an attack of acute phthisis, and, as he

said, had excessive dyspnœa and violent cough, although he neither coughed nor apparently had any difficulty of breathing. He also complained of an entire loss of appetite, and inability to take food, yet he ate three hearty meals daily. At times he thought he was about to die from an extensive affection of the heart; and also, that his liver and kidneys were consumed. In short, he was composed of a congeries of all the ills that afflict the human family. He continued in this state for twelve years, only leaving his bed for a few minutes at a time, and then with great difficulty. During the whole time, he only spoke above a whisper, except when angry. He would then become very boisterous, and talk exceedingly loud, which in one or two instances lasted for several days. But when the fit passed off, he was as seemingly incapable of speech as before. On examination, no apparent disease existed further than the natural debility dependent upon so long confinement. By a proper course of mental and physical treatment, he soon recovered, and resumed his ordinary occupation, that of farming. And although it is now over ten years, he has enjoyed uninterrupted good health. Females who are afflicted with this diseased condition of the mind, often imagine they have some severe uterine derangement. And frequently the medical attendant being as ignorant of the cause of the disease as herself, subjects her to a very disastrous course of medication. Another class of patients afflicted with hypochondriasis have, in addition to the imaginary symptoms, some real organic affections which require especial treatment.

Hypochondriasis, no doubt, is induced by a want of harmonious action between the different organs of the brain.

TREATMENT.

The treatment of this malady should consist principally in quieting, as far as practicable, the already-excited facul-

ties of the brain, and bringing other faculties into action. The mind should be constantly directed to other subjects than those to which it has been previously directed; and those subjects should be sufficiently exciting to arrest his former meditations. The head, should be frequently showered in cold, and the body, in tepid water. He should be induced to take as much exercise as his enfeebled condition will warrant. The bowels are to be regulated by mild aperients, and in some cases chalybeates and vegetable tonics will be required. If the disease is complicated with organic affections, it should be treated accordingly.

OPHTHALMIA, OR INFLAMMATION OF THE EYES.

The eye is one of the most delicate as well as one of the most complicated organs of the body.

Diseases of the eye have been until recently very imperfectly understood. Thus has the patient been duped, not only in a pecuniary point, but too often mourns the loss of that inestimable organ.

Ophthalmia is mostly described as a surgical disease, but considering that a large majority of cases of this class originate in some defect of the constitution, the propriety of treating upon them, in a work on practical medicine, will readily be perceived.

Inflammation of the eye may be divided into external, or inflammation of the conjunctiva, and deep-seated, or inflammation of the other tunics, including amaurosis, which is frequently produced by inflammation. This disease is again divided into acute and chronic.

INFLAMMATION OF THE CONJUNCTIVA.

The first symptom complained of, in this form of inflammation of the eye, is a sensation as if particles of sand had insinuated themselves beneath the lids, accompanied by heat, pain, and increased lachrymal secretion; also, intolerance of light. In severe cases there are headache, nausea, constipation of the bowels, anorexia, and more or less disposition to fever. The causes of this form of Ophthalmia are mostly local—as particles of sand, dust, or insects beneath the lids, inversion of eyelashes, &c.

TREATMENT.

The first object should be to remove the cause. If there is an irritating substance beneath the lid, the eye should be thoroughly bathed in cold water while the lid is held open. If the substance is not removed in this manner, a vial cork should be rubbed perfectly smooth with a dry flannel: the particle may then be removed by touching it lightly with the cork. Particles of iron or steel may be removed in this manner; also, by means of a small magnet. When the eye is thus relieved, it may be packed in cold water, and the patient's bowels moved by a dose of anti-bilious physic. If the injury be sufficient to cause inflammation of the eye, a mild diet may be adopted for a few days, and the packs changed as often as necessary to keep them cool.

CATARRHAL OPHTHALMIA.

SYMPTOMS.

After exposure to cold, the eyes are noticed to have a smarting or burning sensation, and the capillaries to be sufficiently dilated to admit of the red corpuscles, whereas

in a normal condition they only convey white ones. The dilated capillaries at first exhibit a radiated appearance, but soon become confluent, and the entire conjunctiva assumes a red and highly inflamed aspect. This condition of the eye is accompanied by chilliness, aching of the bones, and some degree of fever. There is also intolerance to light, and, when the disease has become established, a puriform discharge from the eyes.

TREATMENT.

As this form of inflammation of the eye is dependent upon exposure to cold ; in other words, upon a contracted state of the superficial capillaries, and consequent congestion, or inflammation, of the deep capillaries,—the first indication of treatment is to relax the vessels of the surface, and thus unload the congested internal vessels. To effect this the surface should be thoroughly bathed in warm lye water, the patient placed in bed, and the following emetic given :

R Lobelia seed, pulverized gr. xx.
Ginger Tea Oj.

Add the Lobelia to the ginger tea while warm, and give one wine-glass full every fifteen minutes, until a thorough emetic effect is produced. The bowels should be opened by the liberal use of antibilious physic. During the action of the emetic and cathartic, the eyes should be kept packed in cold, soft water. If the disease has assumed a chronic form, the pack should be applied as warm as the patient will bear it, and an astringent wash used once or twice a day, such as one gr. of nitrate of silver added to one oz. of pure soft water, and a small quantity applied to the eye by means of a camel's hair pencil once or twice a-day ; or the eye may be bathed in a strong decoction of Hydrastin every morning and evening. All irritating salves and eye-washes should be carefully avoided, as they always prove

injurious. If there should be fever, it should be controlled by the use of Aconite. The diet should be cool and bland, the eye precluded from light, and the patient kept quiet.

INFLAMMATION OF THE EYES OF INFANTS, OR PURULENT OPHTHALMIA.

SYMPTOMS.

The symptoms of purulent ophthalmia of children, are somewhat similar to those of catarrhal ophthalmia of adults. The eyes are kept constantly closed, the lids are red and swollen, and glued together by thick puriform matter becoming dry. The skin will be dry, and the bowels irregular. If this disease is neglected, it will result in ulceration of the cornea and loss of the organ. The cause of this disease is exposure to cold, damp clothing, and injuries in washing the child; also the introduction of acrid matter, which is upon the child, into the eye.

TREATMENT.

In the treatment of this affection, the eyes should be thoroughly bathed in a cold, weak solution of Hydrastin, four or five times a-day. They should be kept packed in cold soft water, to which is added a small amount of the Tinct. of Lobelia. The bowels should be kept open by the use of neutralizing mixture and Leptandrin, and from one-half to one drop of Aconite, given every four or five hours. Where the eye-lids become granulated, they should be inverted, and lightly touched with a camel's hair pencil, moistened with a solution of vegetable caustic, once or twice a-day; but much care should be taken that the caustic be all removed before the lids are closed. All poultices should be avoided. Where the disease is of a

scrofulous character, either in children or adults, Muriated Tinct. of Iron, Compound Syrup of Stillingia, Hydrastin, Scrophularia, Quinine, Iodide of Potassium, Iodide of Iron, and a generous diet, are the remedies.

AMAUROSIS.

The term amaurosis is used to denote a partial or total loss of vision, affecting one or both eyes. The causes of this affection are various. It may arise from the inflammation of the sclerotic coat, from inflammation of the iris, from inflammation of the retina, by congestion of the vessels of the retina, by congestion of the brain, by effusion into the base of the brain, by the too free use of ardent spirits, by gastro-intestinal irritation, by tuberculous affection of the optic nerve, by spermatorrhæa, internal use of mercury, exposure of the eye to too strong light, &c.

SYMPTOMS.

The symptoms of amaurosis very much depend upon the cause. Yet the following may be enumerated as generally present in cases of this kind: imperfect vision, pain in the eye, flashes of light, dark spots appearing before the eyes, and in some cases the pupil will be obviously dilated. The disease is mostly insidious, and its progress very slow, although in some cases it is rapid, destroying the vision almost at once.

TREATMENT.

If amaurosis is dependent upon any of the inflammatory affections, a thorough purgative should be given at once.

As,

℞ Podophyllin.....	gr. iij.
Jalapin	gr. j.
Cream of Tartar.....	gr. xxx.

Mix, divide into eight powders, and take one very hour until it operates. After which the patient should be put upon full doses of Tinct. of Veratrum, the pulse maintained at about fifty-five or sixty beats per minute, and the following diuretic or alterative given :

R Syrup of Marshmallow..... Oss.
 “ Iodide of Potassium..... ℥ij.

Mix; dose, one teaspoonful three or four times a-day. The eye should be kept constantly packed with cold water, the diet should be low, and the patient should avoid all exposure of the eyes to the light, and all mental and physical labor. If effusion of lymph has taken place within the tunics of the optic nerve, or any part of the eye, causing amaurosis, absorption can be produced by the following pill :

R Xanthoxilin gr. xx.
 Iridin..... gr. x.
 Podophyllin gr. iij.
 Iodide of Potassium..... gr. xxx.
 Ext. of Dandelion, in quantity sufficient
 to make a pill mass.

Make three-grain pills, and let three to six be taken per day. At the same time, the kidneys should be stimulated by the use of Cream of Tartar water and vegetable diuretics, as Queen of the Meadow, &c. Where there is loss of power in the nerve, bathing the forehead in strong Tinct. of Capsicum, three or four times a-day, will be very beneficial. The eyes should be well protected from strong light, and from three to five drops of Tct. Rhus Radicans given three times a day. If this remedy should fail to give relief in the course of a few weeks, the following mixture should be given :

R Hydrocyanic Acid..... gtt. viij.
 Quinine Sulph..... gr. xx.
 Aqua..... ℥ij.

Mix ; dose, one teaspoonful four or five times a day. The bowels should be kept open by the occasional use of a stimulating purgative. Cold baths should be taken as often as every third day. Where the disease is of long standing, indicating paralysis of the optic nerve, the following may be used to advantage :

R Extract Macrotys..... gr. xx.
 “ Mux Vomica gr. x.
 “ Euonymine gr. xxx.

Mix, and form a pill mass, and make two-grain pills. Dose, from one to three pills, three times a day. During the entire course of treatment, the anterior portion of the head should be frequently bathed with a stimulating preparation.

DISEASES OF THE SKIN.

HERPES, OR SALT RHEUM.

SYMPTOMS.

Small vesicles grouped together upon inflamed patches of skin ; the vesicles contain a thin, light, transparent fluid, which is absorbed or evaporated, leaving a thin transparent scale. This desiccation will desquamate and leave the part, which will again become affected in the same manner. There are two other varieties of Herpes spoken of by writers, viz : Herpes Zoster or Shingles, and Herpes Circinatus or Ring-worm. The symptoms of Herpes Zoster are full and quick pulse, dry skin with fever, tenderness of the Epigastrium, constipation of the bowels ; and the herpetic eruption which generally commences on the bowels, and spreading frequently, encircles the body. The appearance of the eruption, is almost identical with salt rheum : it is in fact the acute form of

it. The symptoms of Herpes Circinatus are very simple; it being only what is known as a ring-worm, no farther description will be required.

TREATMENT.

As an external application, an ointment may be used made as follows :

R Iodide of Zinc.....	gr. xxx.
Ext. of Phytolacca Decandra.....	gr. xx.
“ Black Walnut Bark.....	gr. xxx.
“ Balsam Copaiba	ʒij.

Mix, and rub a small portion on the diseased part, morning and evening. Previously, the part should be well bathed in a strong decoction of Black Walnut buds or leaves. At the same time, the following compound should be taken internally :

R Juglandin.....	ʒj.
Irisin.....	ʒss.
Sac Alba	ʒij.

Mix, triturate, and give from ten to fifteen grains twice a day. Also give one teaspoonful of compound syrup of Stillingia three times a day. If there is tenderness in the parts after the disease seems to be removed, they should be protected by liquid collodion for a few months, to prevent a return. For Herpes Circinatus, or ring-worm, wash the parts in Saleratus water, and cover with Collodion.

In Herpes Zoster, or Shingles, the eruptive surface should be well bathed in a strong solution of zinc, after which apply a slippery elm poultice. A purgative of Juglandin and Cream of Tartar should be given, and repeated from time to time as long as the disease proves active. To control the fever, Aconite or Veratrum should be used, and the surface frequently bathed in lye water. If the disease is periodical, some of the antiperiodic medi-

cines should be given. The zinc wash should be repeated from time to time, until the active inflammation is subdued. Afterwards use the liquid Collodion instead.

ECZEMA.

This is another form of herpetic eruptive disease, and like all others, it is characterized by small blisters or vesicles. There are several varieties of this form of eruptive disease, such as Eczema of the face, or *crusta lactea*, Impetigo, or moist tetter, &c. The causes of these cutaneous eruptive diseases are as numerous as the varieties. They may arise from improper diet, exposure to cold, teething in children, intestinal irritations, &c. They are also hereditary. The symptoms depend very much upon the cause; but in all cases, where the disease is in any way severe, there is more or less constitutional disturbance, such as irregularity of the bowels, fever, quick pulse, scanty and high-colored urine, &c. The limits of this work will not allow of a minute description, of every form, of these eruptive diseases and their symptoms. But as the treatment varies only, as the causes are different, the descriptions and symptoms given will be found sufficiently minute for all practical purposes.

TREATMENT.

There is no class of remedies more efficacious in skin diseases, than the preparations of the *Juglans cinerea*; and the most efficient of these is the *Juglandin*. This should be used in connection with bitartrate of potassa, in sufficient quantities to produce a mild purgative effect. The best preparation of that kind is the following :

R Juglandin	gr. xxx.
Cream of Tartar	gr. xxx.
Pulv. Cubebs.....	gr. xx.

Mix, triturate, and divide into twenty powders, and give one every morning and evening.

The above may be given in connection with, or alternated with antiscrofulous syrup, or Iodide of Potassium. In some cases, iron and antiperiodics will be required. The external applications should be tar ointment, nitromuriatic acid, zinc ointment, ointment of Baptisin, acetic Tinct. of Bloodroot, astringent washes, slippery elm poultices, and Collodion. These different remedies may be used as the nature and character of the disease seem to indicate. In the active stage, the preparations of zinc are the best adapted to remove the disease, while the others are more efficient in the chronic stages.

ITCH, OR SCABIES.

This disease is caused by minute white insects, the *Acarus Scabiei*, or *Sarcoptes hominis*, which insinuate themselves beneath the cuticle, and travel over the different portions of the rete mucosum. It is said that these insects travel in pairs—male and female—and that the female is very much smaller. By the aid of the microscope, they are observed to have a large number of bristles upon the head or proboscis. When they find a soft and moist portion of skin, they burrow beneath a small dermoid scale, and luxuriate until a deposition of a small quantity of serum from the blood warns them, that unless they take their departure, a flood will soon overtake them. But before taking their final leave, the female deposits her eggs at the point of the vesicle; thus a nidus is formed for the complete development of the *acarî*.

SYMPTOMS.

A vesicular eruption makes its appearance between the fingers, and in other soft portions of the skin, accompanied by an intolerable itching. If the vesicle is opened, a small amount of sero-albuminous matter will escape, and if allowed to dry, will form a light brown scale.

TREATMENT.

The only remedy necessary in the treatment of this disease is sulphur, and the reason why this remedy is not more successful, is the inefficiency of its application. The entire surface of the patient should first be washed with soap and water; immediately afterwards, a strong decoction of sulphur should be applied to every portion of the body, and allowed to remain from one-half hour to an hour, when the whole surface should be wiped with a towel, wrung out of strong saleratus water. One application of the sulphur, used as directed above, will generally remove the disease; yet, it is advisable to renew the application several times. The sulphur, on coming in contact with the insect, immediately destroys it.

PUSTULOUS CUTANEOUS DISEASE.

All the diseases characterized by pustules, may be correctly classified under the above head. Willan and Bateman specify four varieties of this form of non-contagious disease, viz : phlyzadium, psydracium, achor, and favus.

SYMPTOMS.

A greater or less number of distinct tumefied eruptions, which gradually mature and become filled with a sero-purulent matter, and having an inflamed base. These may appear in small clusters, and disappear in a few days, or they may cover a considerable part of the hands, face, or other portions of the body, and be accompanied with extensive inflammation of the integument, and extending in some instances to the adjacent tissues, terminating in phlegmonoid abscess. Nearly all the forms of tetter come under this class, as do also impetigo and acne. In some cases, there are constitutional symptoms, as fever, quick

pulse, headache, loss of appetite, &c. The causes of this kind of cutaneous disease, are essentially the same as of the vesicular, but they are more apt to be connected with an impoverished condition of the blood.

TREATMENT.

If this disease appears on the head, it is called *porrigo*, or *scald head*. The hair should be shaved close to the scalp, and the head must be thoroughly washed with soap and water, after which the zinc and tar ointment must be alternately applied, morning and evening — the zinc in the morning, and the tar in the evening: the patient should likewise take a full dose of the alterative syrup three times a day. This course, if persisted in, will remove the disease. When the eruption appears on other parts of the body, the nitro-muriatic acid should be first applied, and be followed by the Tar ointment. A mild purgative of Juglandin and Cream of Tartar, also simple syrup of Stillingia and Scrophularia, equal parts, should be taken in small quantities during the application of the external remedies. When the pustular eruption is connected with extensive inflammation of the skin, a slippery elm poultice should follow the application of the ointment. Should the disease prove obstinate, equal parts of vegetable caustic and pulverized Sanguinaria, should be sprinkled over the parts before each application of the ointment. If there are constitutional symptoms, they should be treated according to their nature; in most cases, iron and vegetable tonics will be required. The diet should be nutritious, and the surface freely bathed once or twice a day. To remove the small pustules which appear on the face, apply a liniment made of equal parts of ammonia and sweet oil. Or, when they first appear, touch them with ammonia, and cover them with Collodion.

PURPURA.

here are several varieties of this disease: as simplex, or *petechial scurvy*, *purpura hemorrhagica*, *purpura nautica*, *purpura scarlatina*. By the term purpura, we understand a greater or less number of livid spots on the skin from extravasated blood. In purpura simplex, the effusion is confined to the skin and cellular tissue, mostly occurring on the arms, legs, and breasts. The spots at first are small, resembling flea-bites, and are frequently very numerous. The countenance is pale, and the patient complains of great debility, loss of appetite, irregularity of the bowels, and periodic fever. If the disease is allowed to progress, it will terminate in what is called purpura hemorrhagica, and is described by Dr. Bateman as follows:

“The petechiæ are often of a large size, and are interspersed with vibices, echymoses, or livid stripes and patches, resembling the marks left by the strokes of a whip, or violent bruises. They commonly appear first on the legs, and at uncertain periods afterwards, on the thighs, arms, and trunk of the body; the hands being more rarely spotted with them, and the face generally free. They are usually of a bright red color when they first appear, but soon become purple or livid; and when about to disappear, they change to a brown or yellowish hue; so that, as new eruptions arise, and the absorption of the old ones slowly proceeds, this variety of colors is commonly seen in the different spots at the same time. The cuticle over them appears smooth and shining, but it is not sensibly elevated; in a few cases, however, the cuticle has been seen raised into a sort of vesicles, containing black blood. This more frequently happens in the spots, which appear on the tongue, gums, palate, and inside of the cheeks and lips, where the cuticle is extremely thin,

and breaks from the slightest force, discharging the effused blood. The gentlest pressure on the skin, even such as is applied in feeling the pulse, will often produce a purple blotch, like that which is left after a severe bruise. The same state of the system which gives rise to these effusions under the cuticle, produces likewise copious discharges of blood, especially from the internal parts, which are defended by more delicate coverings. These hemorrhages are often very profuse and not easily restrained, and therefore sometimes prove suddenly fatal; but in other cases, they are less copious; sometimes returning every day at stated periods, and sometimes less frequently, and at irregular intervals; and sometimes there is a slow and almost incessant oozing of blood. The bleeding occurs from the gums, nostrils, throat, inside of the cheeks, tongue, lips, and sometimes from the lining membrane of the eyelids, the urethra and the external ear; and also from the internal cavities of the lungs, stomach, bowels, uterus, kidneys, and bladder. There is the greatest variety, however, in different instances as to the period of the disease, in which the hæmorrhages commence and cease, and as to the proportion which they bear to the cutaneous efflorescence.

“This singular disease is often preceded, for some weeks, by great lassitude, faintness, and pains in the limbs, which render the patient incapable of any exertion; but, not unfrequently, it appears suddenly in the midst of apparent good health. It is always accompanied by great debility and depression of spirits; the pulse is sometimes quickened; and heat, flushing, perspiration, and other symptoms of febrile irritation, recurring like the paroxysms of hectic, occasionally attend. In some patients, deep-seated pains have been felt about the precordia, and in the chest, loins, and abdomen; and in others, a considerable cough has accompanied the com-

plaint, or a tumor and tension of the epigastrium, right or left hypochondrium, with tenderness on pressure, and a constipated, or irregular state of the bowels. But in many cases, no febrile appearances have been noticed; and the functions of the intestines are often natural. In a few cases, frequent syncope has occurred. When the disease has continued for some time, the patient becomes sallow, or of a dirty complexion, with much emaciation, and some degree of œdema appears in the lower extremities, which afterwards extends to other parts. The disease is extremely uncertain in its duration; in some instances it has terminated in a few days, while in others it has continued not only for many months, but even for years."

When the disease runs a rapid course and terminates in death, it is generally dependent upon the occurrence of hemorrhage into some of the vital organs. Such is the disposition to hemorrhage in this stage of the disease, that although a patient may appear convalescent on retiring to bed in the evening, he may be suddenly seized with violent dyspnœa and orthopnœa, which rapidly increases until death ensues by asphyxia. In such a case, there has been a sudden effusion of blood into the pulmonary tissue, producing pulmonary apoplexy.

Or there may be acute hæmoptysis, caused by the escape of blood into the air passages. In this event, the hemorrhage may be controlled, and the patient recover under proper treatment. The hemorrhage may occur in other organs, as the brain, producing apoplexy and death; or, into the cavities of the chest and abdomen. It also occurs into the cellular tissue, producing extensive ecchymosis, inflammation, gangrene, and death; or the purple spot will gradually assume a yellow appearance, absorption of the effused blood occur, and the patient recover.

In purpura nautica, the purple spot mostly occurs at the roots of the hair, on the gums, and mucous membrane

of the mouth and pharynx. In this form of the disease, the gums become spongy and bleed upon the slightest injury, the teeth become loose, and frequently fall from the gums: there is great debility, a sallow countenance, irregular sleep, and night-sweats, followed by fever; the bowels are irritable, and there is mælena. This latter form of it, Prof. J. G. Jones has treated as a separate disease, under the head of Scurvy or Scorbutus; and considers it the same as various writers have described as sea-scurvy: although he does not favor the opinion, at one time very prevalent, that salt water causes the disease; but states, that the cause is generally more of a positive than a negative character, being the want of such articles of food as furnish the system through the medium of the blood, with certain elements indispensable to life and health. He is of the opinion that these deficiencies consist in the lack of vegetable acids.

On comparing the description of scurvy by Prof. Jones, McIntosh, Bateman, and others, with purpura, as it is described by various individuals, the only difference between what is known as sea-scurvy, and purpura, is the circumstances under which it makes its appearance; both evidently depend upon the same pathological condition of the system.

CAUSE.

The causes of the different varieties of this disease, seem to depend upon a deficiency of vegetable aliment, and long exposure to a damp atmosphere; also, a lack of due exercise, an unwholesome diet, and anything which tends to an impoverished state of the blood. The influence of improper diet, in developing purpura, has been remarkably exemplified within the past year. Owing to the failure of fruit, as well as the potato crop and other vegetables, bread, butter, and meats have been the principal articles of diet; and purpura, which was hardly known

in the country, has become a prevalent disease. So much so, that the most trifling complaints are attended frequently by active hemorrhage. On examining the blood, it is found to be deficient in fibrine, but feebly disposed to coagulate, and very abundant in serum.

TREATMENT.

When the disease first makes its appearance in the simple form, little more is necessary than a liberal diet of fresh vegetables, with out-door exercise, and a small amount of Muriated Tinct. of Iron, say from five to ten drops three times a day. Where the disease assumes a hemorrhagic character, the following may be given :

R Quinine.....	gr. xv.
Citrate of Iron.....	gr. xxx.
Capsicum.....	gr. xx.

Mix, triturate, divide into eleven powders, and take one every three hours. The patient should at the same time make a free use of lemonade, and take a free diet of green vegetables, salt meats, eggs, &c. After the powders are all taken, the following mixture should be given :

R Port Wine	Oj.
Phosphate of Lime	℥ss.
Carbonate of Iron	℥ij.

Mix, shake well, and take one tablespoonful, three or four times a day. If effusion has occurred into the cellular tissue of one of the limbs, it should be carefully bandaged, and kept constantly wet in a strong liniment of camphor, whiskey, and spirits of turpentine. The bowels should be moved once or twice a week, by the use of Antibilious physic and Cream of Tartar. The body should be frequently bathed in warm or cold water as indicated.

Should hemorrhage occur into the bowels, lungs, or any other organ, the oil of Erigeron may be given in five or

six drop doses every half hour. If there should be *melæna*, and the oil of *Erigeron* should fail to arrest it, the nitrate of silver pill may be given as directed under the head of typhoid fever. Or from five to ten grains of *Matico*, may be given every fifteen or twenty minutes, until the hemorrhage ceases. If there is much debility, porter, ale, or brandy, should be given in such quantities as the nature of the case may indicate. The patient should avoid all active exercise, and exposure to a damp, moist atmosphere; let him repeat the Quinine and Iron from time to time, until the disease is removed.

ISCHURIA, RETENTION OF URINE.

In this disease, the urine, accumulated in the bladder, cannot be evacuated without extreme difficulty, or without assistance; when it cannot be evacuated without assistance, the retention is said to be complete; and when it is evacuated without assistance, but with great difficulty, it is said to be incomplete.

CAUSES.

The causes of retention of urine are various; as inflammation of the bladder, small stones or gravel lodging in the urinary passages, hard *fæces* lying in the rectum, pregnancy, stricture of the neck of the bladder, swelling of the hemorrhoidal veins, paralysis of the bladder, prolapsus uteri, inflammation of the mucous surface of the urethra; it also occurs in female hysteria, and from inflammation of the *meatus urinarius*.

SYMPTOMS.

When the bladder becomes abnormally distended with urine, there will be a dull pain in the back, with sharp lancinating pains passing through the bladder. As the

accumulation of urine goes on, the pain increases until it becomes excruciating, the arterial system is much excited, and the pulse beats with increased frequency, rising to 100 or 140 beats per minute. The respiration is hurried, and the skin hot and dry. If the uric acid is allowed to be absorbed into the blood, the brain will sympathize with the other constitutional symptoms, producing delirium, and as I have seen in several cases, clonic spasms. Unless the bladder is evacuated, it will become perforated, producing death; or death may occur as the result of zymotic influence upon the blood and nerves.

TREATMENT.

When the retention is dependent upon inflammation of the bladder, kidneys, or urethra, the bladder should first be evacuated by means of a catheter; after which the disease should be treated, as directed under the head of inflammation of these parts. If it depends upon a stricture, it can generally be overcome by injecting into the urethra, a solution of the extract of Belladonna or Gelseminum :

R Extract of Belladonna..... gr. x.
Warm Water..... ℥ij.

Dissolve the extract in the water, and inject one third into the urethra. If this is not soon followed by relief, it may be repeated every fifteen or twenty minutes. If, in a reasonable time, relief is not effected, the Ext. Gelseminum may be used in the same manner. In my hands this treatment in strictures of the urethra has proved efficacious in a large number of cases. Where the disease is occasioned by a gravelly deposit in the bladder,

R Ext. Eupurpurin..... gr. xxx.
Cream of Tartar..... ℥j.
Apocynin..... gr. xx.

Mix, triturate; divide into ten powders, and give one three times a day in one teaspoonful of Syrup of Iodide of Potassium; the hypogastric and lumbar regions should be bathed every morning and evening in equal parts of sweet oil and spirits of turpentine. Where there is pressure on the neck of the bladder, by fæces lying in the rectum, by pregnancy, or other cause, it should be removed. And then, by the use of Marshmallow, Clivers or flaxseed tea, a cure may be effected. In females, where it is dependent upon irritation of the meatus urinarius, a warm elm poultice, applied to the vulva, and melon-seed tea, will generally effect a cure. If there should be debility of the bladder, with a tendency to paralysis, tonics, combined with Iron, should be used, and the nerves of the back gently stimulated by the application of the electro-magnetic current once or twice a day. During the treatment of retention of urine, whatever the cause may be, the bladder should be evacuated every day by the use of the catheter.

ENURESIS, INCONTINENCE OF URINE.

Incontinence of urine, like retention, is often associated with some constitutional weakness. In advanced life it is usually associated with disease of the neck of the bladder, prostate gland, or with paralysis. Incontinence of urine, in children, mostly occurs in the night only, while asleep; and, not unfrequently, in these cases the urine passes off involuntarily under the influence of a dream.

It is said that in such cases the acid property of the urine is the exciting cause, and that there is a strong tendency to gravelly deposits. In young people, where the urine passes off in the night involuntarily, it is usually retained, at any time, with much difficulty, and will be of a very pale color, and far less serous than is natural. In

old people, this difficulty arises from paralysis, produced by injuries of the spine, or over-distension of the bladder, injuries of the neck of the bladder, &c.

TREATMENT.

In children, where the disease depends upon a changed condition of the urine, the diet should be well regulated, and warm or cold baths given three or four times a week. A syrup of equal parts of *Hydrastus Canadensis* and *Aletris Farinosa* should be given in teaspoonful doses three times a day. Where it depends upon spinal irritation, the irritating plaster should be applied to the spine, and from five to ten drops of the oil of *Erigeron* given three times a day, with a free use of cold baths and friction.

If the bladder is in an irritable state, give the following :

R Dwarf Elder.....	℥j.
Indian Hemp	℥ij.
Marshmallows.....	℥j.

Make one pint of syrup, and add one half pint of gin. Dose, one teaspoonful three times a day. If there is an enlarged condition of the prostate gland, one drachm of Iodide of Potassium should be added to the syrup, and the same quantity taken.

HÆMATURIA, OR HEMORRHAGE FROM THE URINARY ORGANS.

This frequently occurs in certain epidemics of the malignant type, as in cholera and severe remittent and typhoid fever, in which the spleen and liver are implicated; also in *Purpura*, *Scurvy*, and all diseases in which the blood is in an impoverished state. The exciting cause of hæmaturia may be of a mechanical nature, that is, a cal-

culus concretion; or it may be from ulcerations of the bladder, kidneys, or their appendages. When the hemorrhage cannot be traced to some constitutional disturbance, it may be considered directly mechanical. This may depend upon a calculus, either causing irritation or wounding some blood-vessel; or the hemorrhage may occur from ulceration of the bladder, by the irritating effect of the urine itself.

DIAGNOSIS.

When the patient is laboring under no constitutional disease, that is usually accompanied by hemorrhage, or has not been afflicted with calculous affections, if he complains of pain in the urinary organs, and voids blood with the urine, mixed with mucus, and especially if mixed with purulent matter, a breach of surface must exist somewhere in the urinary apparatus. Having ascertained the cause of the hemorrhage, its seat should be sought for. When there are sharp twisting pains along the line of the ureter, darting to the urethra and testicles, accompanied with nausea and vomiting, it may be reasonably supposed that it depends upon the presence of calculus in the ureter or kidneys. On the other hand, when the hemorrhage comes on after exercise, and there is occasional retention, accompanied by a twinging pain in the penis, there can be but little doubt that the hemorrhage is caused by stone in the bladder. Where the hemorrhage is from the kidneys, the first urine that flows is generally clear, the blood mostly passing at the close of micturition.

TREATMENT.

The treatment of hæmaturia will depend upon the cause, the degree and locality.

Where the disease is dependent upon scurvy or purpura, it should be treated as directed under that head, with the addition of astringents, such as an injection of a weak

solution of Matico into the bladder, and the oil of Erigeron taken internally. If occurring as *melæna*, the effect of obstruction of the liver and spleen, give the following :

℞ Muriated Tinct. of Iron.....	ʒij.
Quinine.....	gr. xx.
Water.....	ʒiij

Mix, and give one tablespoonful every four or five hours until the active stage of the disease is passed. After which, the following mixture :

℞ Gin.....	℥j.
Sugar	lbj.
Water	℥j.
Aletrin	ʒj.
Euonymine.....	ʒij.

Mix, and give one tablespoonful three or four times a day. The region of the liver and spleen should be bathed two or three times a day in a liniment composed of sweet oil and spirits of turpentine. Where *hæmaturia* is connected with a gouty diathesis, a free purgative of Podophyllin and Cream of Tartar may be given in the commencement of the treatment, followed by full doses of the oil of Erigeron, until the hemorrhage ceases. After which, nitro-muriatic acid and Euonymine should be given. If calculus in the kidneys is the cause of the disease, a strong decoction of the Queen of the Meadow will dislodge it and arrest the hemorrhage; after which, mucilaginous diuretics should be given, such as marshmallow, flaxseed, &c. When the cause of *hæmaturia* is seated in the bladder, it should be injected first with warm water, afterwards with a strong solution of Matico mixed with starch-water. The back and loins being thoroughly bathed with a liniment prepared as follows :

℞ Oil of Capsicum.....	gtt. x.
Alcohol.....	Oss.
Oil of Origanum.....	ʒiij.

Mix, and use as heretofore directed. If there is much inflammation of the bladder, scarify and cup over that region, and apply hot packs. At the same time give Aconite or Veratrum until the symptoms are controlled. If the bladder should become distended with a large amount of coagulated blood, recourse must be had to a large-sized catheter; and by the aid of an exhausting syringe and an occasional injection of the bladder with cold water, the coagula may be removed. Should the hemorrhage become active while thus evacuating the bladder, it may be arrested by injecting a solution of Matico into the rectum.

CONGESTION AND INFLAMMATION OF THE UTERUS.

This disease is but imperfectly understood; and more frequently than otherwise passes unobserved both by the patient and her medical attendant. In a great majority of cases it is treated by physicians as prolapsus uteri, amenorrhæa, dysmenorrhæa, menorrhagia, or leucorrhæa; the primary cause of the disease is overlooked, and the symptoms only receive attention. Hence it is that but little if any benefit is derived from the ordinary course of medication in this class of cases.

The hydropathists have acquired some reputation for treating this class of cases, and in many instances they have had superior success. Their success, however, is not dependent upon a more extensive knowledge of the affections so much as the remedy upon which they rely being better adapted to relieve this peculiar pathological condition of the uterus, than the remedies generally used for this purpose.

Congestion of the uterus, like congestion of other organs, is a disease of frequent occurrence, and is caused by the

accumulation of blood in the veins and capillaries. The congestion is generally combined with infiltration into the cellular tissue of the uterus, producing œdema of the uterus, and in some cases the œdema is very considerable.

SYMPTOMS.

On making a vaginal examination of the uterus, a complete congested appearance is manifest. The uterus is enlarged and vesicular, and in places the veins have a varicose appearance. In the incipient congestion of the uterus the appearance very much resembles that of early pregnancy. The uterus is tender upon pressure, and if the disease is of long standing, the broad ligaments and vagina also present a similar congested condition. In other cases there is excoriating granulations, or ulceration of the neck of the uterus and its lining membrane. Congestion of the uterus, like the congestion of other similar tissues, is followed by pathological changes, such as an increased afflux of blood to the part; a loaded condition of the capillaries, the blood circulating with less and less force until it finally ceases, and a complete barrier is formed to the further circulation of blood in the part. At this stage inflammation is said to commence. But where congestion assumes a chronic form, as it mostly does in the uterus, the vessels, after having been thus distended for some time, contract upon their own contents, forcing the more fluid portions of the blood out of the vessel into the adjacent areolar and cellular tissues; and in this way the parenchyma of the uterus becomes extensively infiltrated with the fluid portion of the blood. Where the congestion extends to the vagina and inner membrane of the uterus, a similar exosmosis occurs from the congested capillaries of the parts; instead of being retained in the parenchyma, it escapes into the cavity of the uterus and vagina, mixing with the mucus, and thus constituting what is known as the whites. In case

the blood is anæmic, and the patient of a scrofulous cachexia, the salts of the blood held in solution will make their escape with the serum, and, mingling with mucus, cause a mucopurulent or muco-serous discharge. If there is abrasion of the uterus or its appendages, the sanious secretion from the ulcer, mixed with the disintegrated tissues of the parts, often renders the discharge not only offensive but exceedingly irritating, denuding the vagina of its mucous surface and inducing either an acute or chronic inflammation. The constitutional symptoms are a sense of weakness, weight, or pain in the back; the patient complains of nervousness, pains in the head and shoulders, often changing to different parts of the body. The functions of the stomach and bowels become deranged; the countenance is sallow, and the skin has a dry and husky appearance; the lips lose their color, and the eyes their natural brilliancy; the feet and hands are mostly cold, although in some cases, and in some portions of the day, they are hot and burning. The menses are mostly irregular either in quantity, quality, or time of occurrence. I have observed all these symptoms in connection with congestion of the uterus. If the disease is allowed to advance, palpitation of the heart will occur, with cough, bronchial irritation and expectoration of mucus. At this stage of the disease, the increased weight of the uterus, together with the relaxed condition of the muscular tissue, causes the uterus to gravitate into the pelvis, resulting in what is usually known as prolapsus uteri. The lower floor of the abdominal cavity thus giving way, enables the whole contents of the abdomen and thorax to settle from their normal position. The bowels, stomach, liver, spleen, heart, and lungs, all being thus displaced, put the pneumogastric nerve and upper portion of the lung upon a stretch, producing a constant irritation and materially increasing the cough, which before was considerable. If this condition of things is allowed to continue, the blood

soon becomes impoverished, owing to a defective appetite, irregular respiration and leucorrhæa, and a tuberculous deposition occurs in the lungs. In cases where the uterus has become impregnated, the symptoms frequently somewhat abate, although in several cases I have known them to be very much aggravated, and maintain an uncommon obstinacy during the entire stage of gestation. Where the uterus remains thus congested during pregnancy, the disease is very liable to terminate in inflammation immediately after delivery, proving very obstinate, and, unless properly treated, disastrous to the patient. In these cases there is acute pain just above the pubes, quick pulse, hot skin, and retention of urine, either partial or complete. The tongue will soon be covered with a dark brown coat, and many times there are convulsions. The bowels are constipated, and in many cases there is nausea and vomiting.

If the disease is not controlled, delirium, coma, and death ensue. The inflammation may be less acute, extending to the peritoneum, causing a tympanitic condition of the bowels, suppression of the lochia and milk, with violent fever. There are other points of great interest connected with this form of uterine derangement, which the limits of this work will not allow me to consider.

CAUSES.

There are a variety of causes which may produce this condition of the uterus; such as the frequent use of emmenagogues, which contain mercury, exposure of the feet to the damp and cold earth by wearing thin shoes; the practice of dressing in such a manner as to compress the waist, thus preventing the return of the venous blood to the heart by the superficial veins, also obstructing the capillary circulation; hence the blood is forced through the deep capillaries, inducing congestion of the uterus. It may also be caused by repeated abortions, by excessive

venery, by cold and exposure; in short, anything which will induce it in any of the internal viscera, will produce it in the uterus.

TREATMENT.

In commencing the treatment of this disease, the cause should be constantly kept in view, and as far as possible be removed. To remove the congestion, a plaster should be applied to the abdomen over the uterus, composed of the following materials :

R Gum Galbanum.....	℥ij.
White Pine Gum.....	℥j.
White Wax.....	℥jss.

Melt the gums and wax together, add one drachm of pulverized blood-root, and stir until it becomes thickened; spread a coat of it upon a thin piece of leather, large enough to cover the uterus, and apply. It should be renewed from time to time until relief is effected. At the same time, give the following compound :

R Gelsemin.....	gr. ij.
Bebeerine.....	gr. xxx.
Caulophyllin	gr. x.
White Sugar.....	gr. xxx.

Mix, triturate, divide into twelve powders, and give one every six hours. During the administration of these powders, vaginal injections of the cold infusion of Cinchona should be used two or three times a day. During the early part of the treatment, a thorough hand-bath should be taken every morning as indicated; also an occasional sitz bath. The above treatment should be pursued for ten or fifteen days; the following may then be substituted :

R Carbonate of Iron.....	℥j.
Pulv. Queen of the Meadow	℥ij.
Cream of Tartar.....	℥j.

Port Wine Oj.
 Sugar lbj.
 Gin. Oj.

Dose, one tablespoonful three times a day. At the same time :

R Fol. Jugland Regiæ, or Fresh Walnut leaves. ℥vj .
 Port Wine Oj.

Make a Tincture, and use a syringe full, as vaginal injection, once or twice a day. The plaster should be removed, and a wet girdle worn around the lower portion of the abdomen and back. During the entire course of treatment, the bowels should be regulated by the use of neutralizing mixture. If any of the symptoms, described as dependent upon this disease, should remain after using the above remedies for a reasonable length of time :

R Macrotin gr. xx.
 Senecin gr. x.
 Capsicum gr. xx.
 Vallet's Ferruginous Mass ℥j .

Mix, and form a mass. Make three-grain pills, and let one be taken three times a day, alone, or in connection with other medicines as indicated. If there should be ulcers upon the vagina or uterus, the speculum should be introduced, and the vegetable caustic be applied, after which the ulcer should be covered with powdered slippery elm. Much care will be required in making this application, to prevent the caustic from coming in contact with parts not diseased. If there should be a scrofulous diathesis, connected with this disease, Stillingia and Iodide of Potassium may be used in connection with the other remedies. The diet in any case should be free and nutritious. In case the congestion should terminate in a latent form of inflammation, Muriated Tinct. of Iron, Veratrum, Cinchonine, and Cornine, in connection with the local applications, as directed under the head of congestion.

Where active inflammation ensues, a full cathartic of Podophyllin and Cream of Tartar should be given in the commencement, followed by cold packs to the bowels, and full doses of Muriated Tinct. of Iron and Quinine. If convulsions are connected with the inflammation, Gelsemin, Lobelin, and Belladonna, should be used in sufficient quantities until that symptom is relieved. During the inflammatory stage, the patient must be kept quiet, but in the congestive form of the disease, moderate exercise should be taken.

CESSATION OF THE MENSES.

At the period of life when the menses should cease, the discharge usually becomes irregular; sometimes being obstructed for two or three months or more. Among the symptoms of this period, are nausea and vomiting, swelling of the abdomen, tenderness of the breasts, &c. These symptoms are frequently mistaken for pregnancy; connected with the above, there are frequently uterine pains, with dragging sensation in the back and loins; at times there is fever, accompanied by violent headache, a full, strong pulse, a loaded tongue, and symptoms of indigestion. The nervous system generally sympathizes with the other affections, causing nervous headache, neuralgic pains, periodic diarrhoea, and costiveness. These symptoms may all be mitigated by a sudden return of the menses, which may last much longer than is natural, and also be more profuse; upon their cessation they may again return in an aggravated form.

This period in female life is truly designated the critical period; and, although this is necessarily the case, owing to the important physiological changes which occur at this time, yet it is frequently made much more so, from the abuse of quack medicines.

TREATMENT.

When the symptoms are slight, but little more will be necessary than to regulate the bowels and diet, bathe the surface, and occasionally to wear a pack on the lower portion of the bowels, wet with equal parts of water and whiskey; but, where the symptoms are severe, in addition to this, a purgative of anti-bilious physic should be taken, and afterward the following compound:

R Aletrin.....	gr. xxx.
Cypripedin	gr. xx.
Pterin.....	gr. xxx.
Carbonate of Iron.....	gr. xxx.
White Sugar.....	℥ij.

Mix, and add to one pint of Port-wine. Dose, one table-spoonful three times a day. Also,

R Irisin	gr. xxx.
Hyosciamin.....	gr. v.
Podophyllin	gr. ij.
Extract of Dandelion sufficient to make thirty pills. Let one be taken night and morning.	

If neuralgic pains should occur,

R Belladonna.....	gr. j.
Quinine.....	gr. xv.
White Sugar.....	gr. xx.

Mix, triturate, divide into eight powders, and take one three times a day. Constitutional symptoms of every variety manifesting themselves during the period, should be met with such remedies as are indicated.

DISEASES OF THE OVARIES.

The ovaries are subject to a number of diseases, as *dropsy*, *sarcoma*, *hypertrophy*, *atrophy*, &c. Among the most common is dropsy ; hence, I shall confine this article mostly to that disease.

SYMPTOMS.

A slight fugitive pain will be felt in the region of the ovaries. The ovary will be found to be larger on one side than on the other. This tumor, which is but very small at first, gradually increases in size, until it finally presses upon the uterus and vagina, causing uterine and vaginal irritation, difficult micturition, and prolapsus ani. On examination, the tumor may be felt between the vagina and rectum. This is particularly the case before it becomes very much enlarged. Sometimes this tumor ascends into the cavity of the abdomen, and presents very much the appearance of the gravid uterus. The tumor may gradually increase until it becomes of an enormous size.

A specimen is now in the museum of the Eclectic College of Pennsylvania, of a tumor which grew to such an enormous size as to contain over three gallons of fluid. In some instances, the fluid becomes spontaneously absorbed. This occurred in a case which came under my observation, where the ovarian cyst was of a size sufficient to hold a gallon.

In other cases, inflammation occurs in the cyst, which may produce death. Sometimes the cyst adheres to the parietes of the abdomen, to the bowels, or vagina ; in this event, occasionally, a fistulous opening occurs, and the fluid makes its escape ; but as the internal membrane of the cyst is so organized as to constantly secrete this gelatinous fluid, a discharge will be maintained until death ensues from exhaustion.

TREATMENT.

I do not propose to speak of the surgical treatment of this disease, but to confine my remarks entirely to that form of medical treatment which has proved successful in my hands in removing the disease in its early stage.

In the commencement, a pad should be placed over the tumor, kept in its place and caused to make gentle pressure upon it, by a bandage passing around the body. The pad should be wet with the Tinct. of Iodine before applying it, and afterwards once or twice a day throughout the entire treatment. The bandage should be so adjusted as to maintain a constant pressure. The patient may also take the following syrup :

R Syrup of Iodide of Iron..... Oss.

Syrup of Stillingia..... Oss.

Dose, one teaspoonful four or five times a day. The bowels should be evacuated once or twice a week with Cream of Tartar and Podophyllin. When this course has been pursued for four or five weeks, substitute the following :

R Syrup of Marshmallow..... Oj.

Iodide of Potassium..... ℥ij.

Mix, and give one teaspoonful four times a day, occasionally using the purgative as before.

This treatment persisted in, has in my hands proved successful in several cases of ovarian dropsy, and in some where it was considerably advanced. The pressure, in connection with the Iodine, acts as a constant stimulant to the absorbents, and by the alterative effect of the medicine, the cyst ceases to secrete the gelatinous fluid.

SCROFULA.

Scrofula, says Ericksen, is a peculiar constitutional condition, either hereditary or acquired, that leads to the formation of, and in its full development is characterized by the presence of tubercle. It is, however, only when fully developed that scrofula gives rise to the local deposit of tuberculous matter. The constitutional condition that tends to this is sufficiently characteristic; but although we may recognize its existence, and speak of the individual possessing such a constitution, as having a scrofulous tendency or diathesis, he can scarcely be considered to labor under the fully formed disease, unless tubercle be deposited in some of the tissues or organs. The scrofulous diathesis is a peculiar constitutional state that is often erroneously confounded with general debility. It may and often does co-exist with this, but is by no means synonymous with weakness of constitution. Debility often exists without any scrofulous tendency or taint, more particularly in individuals of the nervous temperament; many delicate people, though weak, being perfectly healthy, and showing no disposition to this peculiar affection; on the contrary, the scrofulous tendency is often conjoined with much muscular power and mental activity, no weakness being manifested in either of these respects. Scrofula is invariably conjoined with debility and a perversion of the nutritive functions of the organism. This is especially manifested in certain tissues, such as the mucous and cutaneous, and in those organs the vitality of which is low, as the lymphatic glands, the bones and joints. In these, scrofula is especially apt to influence the products of nutrition and of inflammation, more particularly during the earlier periods of life, when these actions are most energetic, in such a way as to render its existence evident to the surgeon. It is this tendency to the occurrence of particular

diseases, and to the engrafting of special characters on affections of certain tissues, that may be considered as specially indicative of the scrofulous diathesis, of that condition which, in its fulness of development, gives rise to deposits of tubercle in the organs and tissues.

The existence of this diathesis is marked by the presence of a peculiar temperament,—by special modifications of the seat, form, and products of inflammation, and, lastly, by the development of tubercle.

The scrofulous temperament assumes two distinct forms, and each of these presents two varieties. The most common is that which occurs in persons with fair, soft, and transparent skin, having clear blue eyes, with large pupils, light hair, tapering fingers, and clear white teeth; indeed, whose beauty is often striking, especially in early life, being dependent rather on roundness of outline, than grace of form; and whose growth is rapid and precocious. In these individuals the affections are strong, and the procreative powers considerable; the mental activity is great, and is usually characterized by much delicacy and softness of feeling, and vivacity of intellect. Indeed, it would appear that the nutritive, procreative, and mental powers are rapidly and energetically developed in early life, but become proportionably and prematurely exhausted. In another variety of the fair scrofulous temperament, we find a coarse skin, short and rounded features, light grey eyes, crisp and curling sandy hair, a short and somewhat ungainly stature, and clubbed fingers; but not uncommonly, as in the former variety, great and early mental activity, and occasionally much muscular strength.

In the dark form of the scrofulous temperament, we usually find a somewhat heavy, sullen, and forbidding appearance; a dark, coarse, sallow, greasy-looking skin; short, thick, and harsh curly hair; a small stature, but often a degree of torpor or languor of the mental faculties,

though the powers of intellect are sometimes remarkably developed. The other dark strumous temperament is characterized by clear, dark eyes, fine hair, a sallow skin, and by mental and physical organization that pretty closely resembles the first-described variety of the fair strumous diathesis.

In all these varieties of temperament, the digestive organs will be found to be weak and irritable. This condition, which I believe is invariably associated with struma, and the importance of which has been pointed out by Sir James Clark, must be regarded as one of the most essential conditions connected with scrofula, and as tending greatly to that impairment of nutrition which is so frequent in this state. This gastric irritability is especially characterized by the tongue, even in young children, being habitually coated towards the root with a thick white fur, through which elongated papillæ project, constituting the pipped or strawberry tongue; the edges and tip, as well as the lips, being of a bright-red color. This state of the tongue is aggravated by stimulants, high living, and the habitual use of purgatives. In the fair varieties, the bowels are usually somewhat loose; but in the dark forms of struma, there is a torpid condition of the intestinal canal. In all cases the action of the heart is feeble, the blood is thin and watery, and there is a tendency to coldness and often to clamminess of the extremities.

One of the most marked characteristics of struma, is certainly the peculiar modification that inflammation undergoes, whether we regard the course that it takes, the form that it assumes, its products, or its seat. The course of inflammation in strumous subjects is always slow, feeble, and ill-developed, the more active and sthenic conditions being rarely met with. In its form, it is either ulcerative, congestive, or suppurative, and in its products it is characterized by little tendency to adhesion, by the

production of thin, weak, blue, and ill-developed cicatrices, and by the formation of thin, curdy pus, with much shreddy corpuscular lymph.

The seat of strumous inflammation varies greatly; the peculiar modifications of its course, form, and products, are assumed, according to the part that it affects. The tissues implicated by it, are chiefly the skin and mucous membranes, the joints, and the bones; occasioning a great variety of special diseases, according as one or another of these structures is affected. It is as the result of, or in connection with, these local affections, that the general symptoms of struma become most marked. Whatever the temperament may be, the individual becomes emaciated, sallow, cachectic, and debilitated, and at length falls into a state of hectic or marasmus.

When affecting the skin, scrofula declares itself under a variety of cutaneous eruptions, especially the different forms of eczema of the scalp, and various ulcers on the surface, usually weak and largely granulating, with considerable swelling of surrounding parts, and a tendency to the formation of thin, blue, and glazed cicatrices.

The *mucous membranes* are commonly extensively affected, and often present the earlier forms of scrofulous disease in childhood; this is more especially the case with those of the eyelids and nose. The conjunctiva becomes chronically inflamed, with perhaps ulceration of the cornea; the mucous membrane of the eyelids may be permanently congested and irritated, with loss of eyelashes, constituting the different forms of psorophthalmia. The mucous membrane lining the nostrils becomes chronically congested, red, and swollen, giving rise to habitual sniffing of the nose, and to a sensation as of a constant cold. Occasionally the lining of the antrum becomes irritated, and may then occasion an enlargement of this cavity, or the discharge of unhealthy pus into the nostrils. The

tonsils are often found chronically enlarged and indurated, with occasional tendency to fresh inflammation; and the larynx may become the seat of various forms of aphonia, dependent on congestion of its lining membrane. The state of the gastro-intestinal mucous membrane, has already been described when speaking of the state of the tongue; and that of the genito-urinary organs is also marked by a tendency to debility and irritation, indicated by the occurrence of discharges from the urethra, under the influence of very slight exciting causes, and that are often very permanent in their character. The occurrence of calculus in the bladder, especially in children, may also occasionally be attributed to the scrofulous diathesis.

Perhaps the most important local diseases arising under the influence of this agency, are those of *the bones and joints*. The bones are liable to the occurrence of various forms of caries and necrosis; more especially those that are spongy in their texture, as the short bones of the foot, and the articular ends of the long bones. The joints are liable to that large class of affections that are commonly known as *white swellings*, and which consist of thickening, disorganization, ulceration, and suppuration of the synovial membranes and cartilages.

Lastly, some of the *glandular organs* are peculiarly prone to scrofulous disease. Enlargement of the lymphatic glands, more particularly those at the side of the neck, and the glands of the jaw, is of such frequent occurrence, and is usually so early a sign, that the surgeon, in determining whether an individual is scrofulous or not, commonly passes his hand over the glands in these situations, in order to ascertain their condition and size; these glandular enlargements are especially apt to run into unhealthy and chronic suppuration. The testes and the mammæ are occasionally affected; and other glandular

structures, though sometimes implicated, are by no means so commonly found diseased, as those just mentioned.

The occurrence of *tubercle* must be looked upon as the distinctive characteristic of scrofula, and when it occurs it may be considered a sure sign of this affection, which has then reached its ultimate development. In those cases in which the scrofulous diathesis exists without having given rise to this product, it must be considered as not having been called into full and active operation, having merely manifested itself in the minor forms of the disease, such as ulceration of the skin and mucous surfaces.

Tubercle, though sufficiently well marked by its appearances and progress, cannot be looked upon as a specific affection, but must be considered to be a perverted or unhealthy development of the nutritive materials, destined for the repair of the body and the restoration of the blood. According to Mr. Simon, it consists of the lymph or nascent blood. It is a "dead concretion," a "fibriniform product, insusceptible of development." "The scrofulous diathesis," says Mr. Simon, "consists in a peculiarity of blood development, under which the nascent blood tends to molecular death by superoxydation." According to Dr. Williams, tubercle is a degraded condition of the nutritive material from which the old textures are renewed, and the new ones formed, and it differs from fibrine or coagulable lymph, not in kind, but in degree of vitality and capacity of organization."

"Tubercle essentially occurs in two forms, as semi-transparent grey granulations, smooth and cartilaginous in look, somewhat hard, closely adherent, and accumulated in groups, often with a good deal of inflammatory action in the surrounding tissues. These grey granulations, usually about the size of a small pin's head, appear to consist of a modified exudation of matter. They have a tendency to run into masses, and to form the true yellow tubercle,

which is met with in opaque, firm, but friable concretions, of a dull whitish or yellowish color, homogeneous in structure, and without any appearance of vascularity.

The microscopic characters of tubercle present no very specific appearances. We find that this product presents under the lens, a homogeneous struma, which chiefly occurs in the grey granulations, a granular matter which is principally met with in yellow tubercles, drops of molecular oil, and, lastly, considerable quantities of imperfectly developed exudation cells, more or less disintegrated, stationary or degraded.

The progress of tubercle is most commonly to disintegration and liquefaction, at the same time that it gives rise, by its irritation, to inflammation and suppuration in the surrounding tissues; hence it commonly leads to abscesses, the pus of which is always curdy and shreddy. In some cases tubercle may become indurated, and undergo a species of calcification. The *causes* of scrofula, unless this be of an hereditary character, though very various in their nature, are usually such conditions as influence injuriously the nutrition of the body. The hereditary nature of scrofula is well known, both to the public and to the profession, for although the disease is not commonly connate, yet the tendency to it is, and the characteristic nature of the affection often manifests itself at an early period, notwithstanding every effort to prevent its development. That a parent may develop a tendency to malnutrition, to misdevelopment of the blood, just as he may a peculiar feature or mental condition, is undoubted. It is by the hereditary transmission of peculiar combinations and modifications of action in the organization, that hereditary diseases develop themselves at certain periods in the life of the offspring, when the injurious results of the morbid actions that have been transmitted, have had time to be produced. There are certain conditions which, though not scrofulous,

are supposed to have a tendency to develop this disease in the offspring to which they are transmitted ; thus dyspeptic parents are said, and I believe with reason, to have strumous children ; so, also, the offspring of very old or very young people, often exhibit a proneness to scrofulous affections. The influence of intermarriage is still a matter of doubt, though I believe it exerts but little influence in this respect, and it is commonly stated that the inhabitants of little communities, who intermarry closely, such as those in the isles of Portland and Man, are not more liable to scrofula than other individuals. The most potent cause of scrofula, and that which in civilized countries is likewise most frequent, is mal-nutrition, arising either from want of food, or the use of inferior food by the poorer classes, or from over-feeding, and over-stimulation of the digestive organs in the children of the wealthier orders of society, thus inducing chronic irritation of the mucous membrane of the stomach, interference with the digestive powers, and consequently with nutrition. The influence of food that is insufficient in quantity, or innutritious in quality, has been shown by Mr. Phillips, in his excellent treatise on scrofula, to be the more immediate cause of this disease ; and when conjoined with the injurious atmosphere of large towns, of close and over-crowded rooms, and want of light and exercise, may be considered as sufficient to occasion the disease in those cases in which no predisposition to it exists, and greatly to develop any tendency to it in the system. It is to the conjoined influence of agencies such as these, that we must attribute the prevalence of scrofula amongst the lower orders of town and rural populations.

Scrofula is often called into immediate action by the debility induced by previous diseases, such as measles, scarlatina, hooping cough, &c. It usually develops itself at an early age, though seldom before the child has reached

its second year. It is most commonly about the period of the second dentition that the disease declares itself, and it is rare to meet with it, for the first time, after the ages of twenty-five or thirty-five.

According to Phillips, when it is fatal it generally proves so before the fifteenth year; 60 to 70 per cent. of the deaths occurring before this age. Sex does not appear materially to influence this disease, though according to the same authority, the deaths of males from scrofula, exceed those of females in this country by 20 per cent. If, however, we are to regard phthisis as an allied affection, people who are scrofulous in early life, often having phthisis developed at a later period, these numbers may require correction.

TREATMENT.

The treatment of Scrofula may be divided into preventive and curative. The preventive treatment consists in so regulating the diet, as to supply all deficiencies in the histogenic material of the different tissues. The digestive and assimilating organs should receive special attention, every possible effort being made to increase their tone. The surface should be bathed three or four times a week in warm or cold water, as best agrees with the constitution. A liberal amount of exercise in the open air should be taken, and the patient should avoid all excesses, both physically and mentally. When these means fail to arrest the tendency to scrofula, a moderate amount of stimulants, in combination with small quantities of Iron, may be taken before each meal. When the disease has become fully developed, whether in the skin, lungs, bones, liver, stomach, uterus, kidneys, or any other part of the system, the constitutional treatment should consist in a thorough tonic and alterative course. In case the disease appears in the form of herpes or pustules, the treatment has been fully described under that head. Or, if in the form of

phthisis, the treatment has already been given. When scrofula manifests itself in the form of ulcers, of an indolent or irritable character, the constitutional treatment should consist of the following remedies :

R Scrophularin	gr. xx.
Bitartrate of Iron	ʒij.
Chloride of Sodium.....	ʒj.
White Sugar.....	ʒiij.

Mix, triturate, and take one teaspoonful three times a day. The diet should consist of rich animal broths, ripe fruit, &c. ; and a wine-glass full of malt liquor should be drunk with each meal. The ulcer should be stimulated by the occasional application of a mild solution of sulphate of zinc, or vegetable caustic. The limb should be bandaged with moderate tightness, and the ulcer covered with a soft slippery elm poultice. After the above treatment has been pursued for about two weeks, it should be changed to the following :

R Compound Syrup of Stillingia.....	Oss.
Syrup of Apocynum	Oss.
Syrup of Iodide of Potassium.....	ʒij.

Mix; dose, from one teaspoonful to one tablespoonful three times a day. This treatment should be pursued for two or three weeks, when it should be omitted, and the following substituted :

R Phosphate of Lime.....	ʒss.
Carbonate of Iron.....	ʒiij.
Phytolaccin.....	gr. xv.
White Sugar.....	lbj.

Mix, triturate and add to one pint of water, and one pint of best gin. Dose, one tablespoonful three times a day. If the ulcer should still prove indolent, it may be touched with caustic of potassa, followed by a poultice of slippery elm, wet with Tinct. of Arnica. Where the disease appears in the form of caries or necrosis of the bone, the dead por-

tion should be destroyed by the sulphate of zinc or caustic potassa. The sore should be stimulated as in ulcer of the soft parts, until it becomes healthy. After which, collodion or a mild ointment may be applied, until union takes place. In no case, however, in disease of the bones, should the ulcer be allowed to heal until the necrosed portion of bone has been entirely exfoliated, and the ulcer healthy in every respect.

Where scrofula attacks the glands of the axilla, groin, or breast, causing enlargement and irritability of these parts, absorption should be promoted, if practicable, by the use of Iodine ointment and moderate pressure; if this fails, suppuration may be induced by the application of a poultice of equal parts of gum-myrh, capsicum and slippery elm. In such cases, Phytolaccin, Iodide of Potassium, Apocynin, in connection with the compound alterative syrup, are the remedies to be used. In the treatment of this disease, the surface should be frequently bathed, the diet should be nutritious, and consist of both vegetable and animal food. The sleeping apartments should be freely ventilated, and the habits of exercise well regulated.

PILES, OR HEMORRHOIDS.

A varicose condition of the hemorrhoidal veins, allowed to exist for a considerable length of time, causes a disease of its coats, and a consequent infiltration into the adjacent cellular tissue.

The blind piles are essentially the same, only occurring higher up in the rectum.

SYMPTOMS.

A greater or less number of dark purple or pulsating or erectile tumors around the margin of the anus, or within

the anus. They mostly cause much pain, and in some cases the œdema of the parts is so great that defæcation is almost impossible. In other cases there are constitutional symptoms, as fever, headache, loss of appetite, debility, &c. Where the patient is of a scrofulous diathesis, piles may terminate in fistula in ano.

CAUSES.

The causes of hemorrhoids are congestion of the liver, costiveness, ascarides, pregnancy, and all affections which tend to produce inflammation of the parts.

TREATMENT.

R Sulphur..... gr. xxx.
 Cream of Tartar ʒij.
 Cane Molasses Oj.
 Best Gin..... Oj.

Mix; dose, from one teaspoonful to one tablespoonful three times a day. Shake the mixture well before taking. As an external application, an ointment may be used composed of the following ingredients:

R Tannin..... ʒj.
 Fresh Lard..... ʒj.
 Sulphate of Zinc..... gr. vj.

Mix, form an ointment, and apply after each movement of the bowels. Where the hemorrhoids are confined to the upper portion of the rectum, and are accompanied with hemorrhage, from five to ten drops of the oil of Erigeron should be taken three or four times a day. If the first mixture should not be sufficient to maintain a soluble condition of the bowels, from one eighth to one fourth of a grain of Podophyllin should be taken every night on going to bed. When the piles first make their appearance, they can generally be removed by returning the pile tumor, and

afterwards rubbing gently with the finger which has been anointed with simple cerate, until the congested veins become emptied, and the tumor disappears.

FISTULA IN ANO.

This is an indolent ulcer, situated in the lax cellular tissue, adjacent to the rectum. This ulcer or sinus usually communicates externally with the sphincter muscle, by means of a small pipe, in which case it is called an open fistula. Occasionally it communicates with the intestine, without any external opening, in which case it is called a blind fistula.

CAUSES.

Fistula in Ano may be caused by piles, injuries of the part, or anything which will cause cellular inflammation in these parts.

SYMPTOMS.

These are often quite obscure, at other times a heavy dull pain will be felt in the region of the anus, extending at times to the back, accompanied by febrile reaction, scanty urine and accelerated pulse. Sooner or later a small tumor will make its appearance, and is usually mistaken for piles; but on opening, a small quantity of sanious matter will be discharged, which will continue until the disease is removed. Or if blind fistula, the pain and constitutional symptoms may be followed by a discharge from the bowels, through the communication between the intestine and the sinus, by the completion of the fistulous tube.

TREATMENT.

As this disease is usually connected with a scrofulous or tuberculous habit, a constitutional and local treatment

should be commenced at the same time. The patient should take Alterative Syrup, Iron, Quinine, and Iodide of Potassium, with such other remedies as the state of the disease may indicate. At the same time, the fistula should be injected with a strong solution of sulphate of zinc. The injection should be of sufficient strength to disorganize the walls of the sinus, and the fistulous tube. After the fistula has been injected, the parts should be brought as closely in contact as possible, by means of adhesive straps. The injection should be repeated from time to time, until the fistula is entirely cured. Or if, after disorganizing the tube with the zinc, the ulcer still proves obstinate, a strong solution of bayberry and golden seal will generally effect a cure.

If it is a blind fistula, an external opening should be made by means of the caustic potassa, and followed by an injection as before. Previous to injection of the zinc, where the opening communicates with the intestine, the rectum should be injected with slippery elm, to prevent the caustic from coming in contact with the bowels.

MERCURIAL DISEASE.

There is no disease more formidable in its attack upon the organic tissues than this; not only in its tendency to develop a great variety of pathological conditions, but in the peculiar obstinacy with which it resists the efforts of the physician to arrest its progress. Mercurial diseases manifest themselves in periodic rheumatic affections of the joints, in enlarged and indurated condition of the various glands of the body, in the form of dropsies, anæmia, phthisis, palpitation of the heart, dyspepsia, blindness, deafness, loss of teeth, convulsions; in fact, there is no form of disease that is not occasionally represented by

the disastrous influence of mercury. When once introduced into the system, the manner in which mercurial preparations affect the different tissues, is as yet a matter of some dispute. Although it is claimed by those who still persist in its use, that it possesses the power to change the morbid condition of the part affected into another morbid state, which is far less dangerous to the life of the patient than the primary affection; that it acts as a stimulant to the liver, and a purgative to the bowels; in short, it is claimed by those who still adhere to the dogmatism of allopathy, that it is essential to the successful treatment of nearly all inflammatory, as well as chronic diseases. But in what way it stimulates the liver, or how it arrests fever, or subdues inflammation, they are unable to tell us beyond mere conjecture.

It certainly cannot be owing to its power to increase the histogenetic material for the reparation of injured organs, nor to its tendency to reorganize the blood, or other fluids, as the most minute chemical analysis has failed to detect the least trace of mercury in the organic tissue, unless it had been first introduced into the stomach, and then always acting as a foreign agent, and in no way identified as an element of the human organism. The only way by which the *modus operandi* of mercurials upon the organic tissues can be explained, is that by which we explain the inability of all foreign agents to produce disorganization, unless the quantity be sufficient to overpower the *vis-vitæ* of the part with which it comes in contact. When a foreign body is introduced into the external soft tissue, the vitality of the part is at once summoned to remove the intruder, consequently a deposition of lymph occurs around the foreign body, which soon becomes organized in such a way as to cut off all communication between the foreign body and the adjacent tissues. Inflammation and suppuration are the agents used to

expel the body, so when mercury is introduced into the system, it acts as a foreign body to every tissue with which it comes in contact, and an effort is made to expel it. When mercury is combined with chlorine, as in calomel, it may entirely dissolve the tissues, such as the mucous membrane of the stomach, bowels, lungs, &c. But whether we are able or not to account for all the morbid conditions produced by this agent, we have the most positive assurance, that in the whole catalogue of predisposing causes to disease, there is none more prolific than this. Allopathists themselves are beginning to observe this fact, in confirmation of which, I will introduce the remarks of W. Porter, M. D., F. R. C. S. I., &c., as published in the Dublin Medical Press of Feb. 10, 1847.

Dr. Porter observes: "I think that mercurial diseases, properly so called, that is, such as arise from mercury alone, admit of subdivision into two classes, according as they seem to be products of a small or a large dose of the poison; when taken in small quantities, it appears to be determined to the tegumentary structure of the skin, the mucous membranes and analagous tissues, such as the conjunctiva of the eye, and therefore bowel complaints, cutaneous eruptions, and superficial inflammations are generally met with at an early period, and before the specific effects of the medicine ought to be expected to appear; when taken in large quantities, the nervous system is most likely to suffer, and that too where the specific effects have not been developed at all, which is the case most pregnant with danger, or that being present and in full operation, they have been suddenly checked, or otherwise interfered with, by improper or incautious exposure. Some few cases occur whilst patients are under complete salivation; but it is so difficult to say that such may not have been guilty of some irregularity, that they may be placed within the latter category, and at all events they

are of rare occurrence. Such is the arrangement I propose to follow in considering these affections; not, however, without being conscious of its imperfections, and that numerous diseases arise, or seem to arise, from the irritation of mercury, that run a wild and unbridled course, which it would be impossible in the present state of our knowledge to subject to this or almost any other classification. Persons, for instance, whilst taking mercury, become deranged: the examples of this which I have seen were all maniacal, and the symptoms such as might be expected from inflammation of the brain and its membranes; these patients all died. Whether such an event was the effect of too sudden exposure to wet or cold—whether it could be regarded as a kind of metastatic transfer of the mercurial irritation to the brain, or whether it had any direct connection with the mercury at all, I am unable to prove, but certainly at the time when each occurred, I could not help placing the mercury and the madness in the relation of cause and effect. Again, persons whilst taking mercury have become paralytic. When I was in college, a young friend of mine, slightly under the influence of the medicine, was exposed to an incessant shower of rain for nearly two hours; he went to bed, where he had a rigor, but fell asleep, and awoke perfectly paralytic on one side; he lived many years afterwards, but never recovered the use of his limbs. A young clergyman who had taken mercury for a liver complaint, and had apparently nearly recovered from its effects, incautiously fell asleep on the grass; he awoke paralytic, and never recovered, although he lived to more than middle age. Perhaps it may be said that these are not fair specimens of the morbid influence of mercury upon the nervous system; perhaps it may be doubted whether mercury had any relation to such cases at all, inasmuch as persons have become paralytic from exposure, who have never taken a

grain of the medicine. I know not how this may be. My opportunities of investigation have been too limited to enable me to speak with confidence on a matter of so much obscurity ; but my experience in many instances has led me to believe that mercury may prove eminently mischievous in this particular manner. But suppose we acknowledge that mercury may and does act injuriously on the nervous system in all its parts and in its various ways, how are we to account for its prejudicial influence on other systems and structures, particularly as to its production of an hemorrhagic tendency ? Several years ago, when investigating the pathology of aneurism, I remarked the frequency of that disease in persons who had been subjected to protracted courses of mercury, and I then hazarded an opinion that this fearful and dangerous affection might be occasionally thus induced ; since then, I have paid great attention to the subject, and have observed different kinds of hemorrhage so frequently ensue after mercury had been extensively used, that I feel convinced of its injurious influence in this respect. Almost all the aged people treated with mercury for syphilis, have, according to my observation, died shortly afterwards of hæmoptysis, or else of apoplexy ; nor are such casualties confined to the aged, for I have seen several instances of young persons under similar circumstances, being seized with spitting of blood, and dying rapidly of consumption. It may be imagined that I am presenting the possible injurious effects of mercury in too strong colors, and that my apprehensions on this subject, as being derived from the experience of a few cases, are little more than visionary ; be it so ; but having remarked the fact, I think it my duty to state it, and leave it to be established or contradicted by future experience.

“The tendency of mercury to produce a hemorrhagic condition, is readily explicable by the effects of the mineral upon the fibrin of the blood.” W. H. Ranking, M. D.

Mercurial erythema is sometimes preceded by symptoms resembling those which usher in erysipelas, shivering, nausea, foul tongue, thirst, headache, cough, and pains about the præcordia, and these febrile symptoms, not only continue throughout, but in severe cases become daily aggravated; sometimes it occurs without any premonitory notice, except a harsh dryness of the skin; and I have known it to appear suddenly the day after the administration of three or four grains of calomel as a purge. It may be a consequence of administering mercury in any of its forms or preparations, but seems more frequently produced by its administration internally. I have, however, seen an exceedingly well marked case of it from dressing a sore with the red precipitate. It appears as a dark red blush at some of the folds of the body, the seat of the scrotum, the groin, axillæ, or anterior parts of the elbow, from which it spreads with a greater or less degree of rapidity, according to the severity of the case. This is distinguished from ordinary erysipelas, by its surface being slightly rough to the touch—by its edge not being distinctly defined—by its intolerable itching, which is the local inconvenience chiefly complained of in the first instance—and by its vesicular appearance when viewed through a magnifying glass. Whenever the surfaces of the body lie in opposite contact, such as in the perineum, the inside of the thighs, or between the folds of the nates, these vesicles break almost as soon as formed, the parts become abraded, and there is a constant oozing of a serous fluid, foul and abominably fetid. In modern times, the disease seldom progresses beyond this, which is termed the first stage; but suppose it neglected, and the use of mercury still persevered in, the febrile symptoms become exasperated, the eruption spreads, and may so extend as to occupy the entire body, and the vesications, or rather vesicles, run into each other and break. Where surfaces are opposed,

the discharge increases in quantity, assumes a puriform character, and becomes, if possible, still more offensive; when they do not, a branny scurf or scale is formed, which falls off, and is renewed so abundantly, that after the night, or even after a few hours, a great quantity may be found in the patient's bed. In general, this desquamation of the skin is attended with febrile symptoms, and the patient slowly recovers; but if otherwise, if the disease has been more than usually malignant, or if the medicine has been still persevered with, the parts engaged (and these may be the entire body) swell, apparently by the formation of thicker scabs or crusts, which are deeply cracked or fissured (not inaptly compared to the scored skin of roasted pork), discharging sometimes sanies, sometimes blood, and so sore and painful that the patient can scarcely bear to turn himself in bed. I am not quite sure that I ever saw a fatal case of mercurial erythema. About five years ago a poor Scotchman was brought into the hospital covered with a scurfy eruption, and in a miserable state of debility, who attributed his illness to having taken some medicine, which he believed to have been corrosive sublimate, for the cure of clap, in despite of the treatment, he died (as several thought) of this disease; but if it was so, there was a symptom here present not described hitherto as appertaining to it, namely: a discharge of purulent matter as foul and offensive as that from a glandered horse, from every mucous outlet of his body, mouth, nostrils, eyes, ears, anus and urethra. I know not, I say, whether this was a specimen of the disease or not; but without passing to such extremity, the description given by those who had witnessed the latter stages of the malignant erythema, is sufficiently appalling. The cough becomes very severe, and is accompanied by great soreness of the chest; the matter expectorated is sometimes highly tinged with blood, which is so coagulated as to threaten suffocation. The

pulse is frequent and irregular, the surface of the body is intensely hot and sore, the thirst becomes unquenchable, the tongue becomes parched and black in the centre, and the urine is high-colored, small in quantity, and without sediment. Wretched, indeed, is the situation of the patient in this stage of the disease; without the enjoyment of one moment's repose, afflicted in body with the most excruciating anguish, and depressed in mind to the lowest state of despair, he soon falls beneath these complications of wretchedness. Diarrhæa and low delirium speedily supervene, the pulse sinks, the body mortifies, and a state of insensibility at length announces the termination of a complaint that at once exhibits a distressing proof of the inefficiency of medicine, and the insufficiency of human skill."

Before I speak of the treatment, allow me to revert for a moment to the history of this disease. Alley states, "that before the nature of this disease was known, *it was considered as a more virulent form of Syphilis*. In proportion, therefore, as the disorder advanced, mercury in some form or other was exhibited in greater quantity; the fever, consequently, was soon found to be increased to an alarming degree, by the action of the mercury thus heaped upon an already overloaded system; and lest the patient should sink too rapidly under the oppression of this fever, recourse was had to tonics and stimulants. Among these the bark and wine were resorted to, without any regard to symptoms and appearances. It is almost unnecessary to add, that the disease was in almost every instance dreadfully aggravated, and that very few recovered." Now, recollect that all this happened in a Lock Hospital, and at a time when all cases of venereal disease were treated with mercury. The patient was surrounded by, and actually breathing a mercurial atmosphere, and you can easily understand why medicine and

medical skill were inefficacious and insufficient. It was useless to prescribe purgatives, and acids, and antimonials, and other cooling medicines, the cause of the fever remaining ever present; it was in vain to endeavor to support the strength by bark, and wine, and opium, while the tendency to putrescence was constantly on the increase. At present the disease is known to be mercurial.

Mercurial Erethismus. — Mr. Pearson tells us, that in the course of two or three years after his appointment to the Lock Hospital, he observed that in almost every year, one or two cases of sudden death occurred among the patients; that these could not be traced to any ostensible cause, and that the subjects were those who had nearly and sometimes entirely completed their mercurial course. He consulted Messrs. Bromfield and Williams on the subject, and they were unable to give him any information, more than that they had carefully examined the bodies of many who had thus died unexpectedly, without being able to discover any morbid appearances. On watching the effects of mercury on the patients, he ascertained that these deaths were attributable to the mineral acting as a poison on the system, and that its deleterious effects were neither in proportion to the inflammation of the mouth, nor to the actual quantity of mercury absorbed into the body."

TREATMENT.

The treatment of mercurial disease is usually less successful than the treatment of most other diseases; although much good may frequently be done by a proper course of medication.

If mercurial disease is manifested in a mild form, the patient should be caused to take a gentle purge of Podo-phyllin, the surface should be freely bathed in salt water, a mild course of tonics should be commenced and pursued,

and a generous diet should be allowed. This course will frequently remove the most troublesome symptoms.

In more severe cases, as much of the mercury should be extracted from the system as possible, by recourse to the galvanic battery. After which, Compound Syrup of Stillingia, in connection with small doses of Sulphur, will be required. The surface should be frequently bathed in Saline water, and Iron and Hydrastin given in doses sufficient to maintain the patient's strength. Where the disease appears to confine its poisonous action chiefly to the skin, much benefit will frequently be derived from the use of an ointment made of equal parts of tar and sulphur.

IMPORTANCE OF CERTAIN SYMPTOMS IN DIAGNOSIS.

In order to form a correct opinion of the nature, character, and identity of disease, it is necessary to take a general survey of the physical characteristics of the patient: as his weight, height, temperament, age, whether his constitution is of a strumous or scrofulous diathesis, whether of temperate habits, and whether he has been subjected to a mercurial course of medication.

Every possible item of information relative to the disease, should be obtained from the patient and nurse, which will in the least assist in forming a correct diagnosis of the case. If the heart, lungs, liver, or spleen are implicated, auscultation, percussion, palpation, and mensuration, should be practised, for the purpose of forming a correct opinion of the true nature of the disease. Some of the special symptoms which should engross our attention, are the appearance of the tongue, the appetite, respiration, circulation, sleep, the skin and secretions, and state of the intellect. Pain is the result of some impression made upon the nerve, and transmitted to the brain; the pain may be remote from the impression, as in hip disease the pain is generally in the knee; the irritation

causing pain in the head, may be in the stomach; or pain in the shoulder may occur, as the result of congestion of the liver. The amount of pain suffered by different individuals from the same disease is various, owing to the different sensibilities of the persons, and dependent upon the temperament. Hence the amount of the pain experienced by the patient, is indicative of the amount of the disease, *ceteris paribus*. A dull heavy pain generally indicates congestion, effusion, or the pressure of some tumor; fugitive pain indicates a stretch of some part; lancinating pain is characteristic of cancer, rheumatism, pleuritis, or neuralgia; a heavy, throbbing pain, indicates the collection of pus; itching pain is mostly confined to the skin and mucous membrane; on the skin it is caused by eruptive diseases, and on the mucous surface by ascarides in the rectum, &c. When pain suddenly ceases, followed by cold clammy sweats, weak pulse, and sunken countenance, an attack of the affected part by gangrene is indicated.

The tongue affords many important indications of disease of the digestive organs. When the tongue is thickly furred, and of a white or brownish color, it indicates a derangement of the mucous membrane of the stomach. If, in addition to the above, it should have a red appearance at the end, it indicates the mucous membrane of the stomach to be in a high state of irritation or inflammation. A dry red tongue also indicates the same state of the stomach. A cracked and swollen tongue, indicates an extensive irritation of the nerves of the stomach, and also that the brain is involved. When the tongue is tremulous, great nervous prostration is indicated. A dry, furred, or red and tremulous tongue, is often present in typhoid fever. A light, flat tongue, is characteristic of most forms of intermittent fever. Much information, relative to disease, may be obtained by a thorough knowledge of the circulation, as indicated by the pulse. The conditions of

the pulse, indicative of disease, are various. The increased frequency of the pulse is one of its most common varieties, and may exist in a great many pathological conditions of the system. The number of beats per minute, constituting an increase of pulse, varies much in different individuals, and also at different periods of life. In infancy, the normal pulse is said to be from 78 to 180 per minute. Between the age of two and six months, from 100 to 120 per minute. Between the age of two and seven years, about 110 per minute. From seven years to twenty-five, from 80 to 85. From twenty-five to sixty-five years, the average pulse per minute is about 70 to 75. In females it will be found to be somewhat faster: the number of pulsations per minute is greater during the day than night; and more frequent just after a meal than before. From the above statement, it will be perceived that a great variety of circumstances must necessarily be considered, in order to derive much benefit from this condition of the circulation in diagnosis. When the pulse is slow, or much less than the usual number of beats per minute, it frequently indicates disease of the brain; it is also characteristic of other diseases. An intermittent pulse indicates either a disease of the brain, or extreme exhaustion of nervous energy. A weak and feeble pulse indicates anæmia and debility. Hope states, that when the pulse is jerking, quick, hard, and strong, and stops abruptly, it indicates a deficiency in the semilunar valves of the aorta. In inflammation of the peritoneum, the pulse is mostly small and quick, but quick and hard in inflammation of the lungs and pleura. When the pulse is easily compressed under the finger, it indicates a feeble condition of the heart. When the pulse ceases to be felt in the extremities, it indicates great danger, unless it is merely temporary. The appetite is another symptom of much importance to be observed in disease. In most

diseases, the appetite is defective, indicating inability of the stomach to digest food, and loss of assimilating power. Under these circumstances, food introduced into the stomach, acts as a foreign substance, and is the cause of much mischief. In some diseases the appetite is not defective; in these cases, the powers of the stomach, as well as the assimilating functions, remain unimpaired. In some forms of phthisis, the rapid exhaustion of the nutritive material increases the demand for food beyond its normal amount. In chlorosis, the appetite is frequently capricious, craving lime, clay, slate, stones, &c. This kind of appetite indicates a lack of proper histogenic material, as well as a deficiency in the salts of the blood. In children, the appetite frequently craves sugar, fats, &c., which indicates a deficiency of the combustive material, and a consequent loss of temperature.

There may also exist a variety of morbid appetites, such as a craving for stimulating liquors, opium, tobacco, ether, &c., all of which indicate a diseased condition of the stomach or brain. Respiration should also be carefully noticed in forming a diagnosis of disease. If respiration is increased in frequency, it denotes obstructed circulation through the pulmonary tissue. It may also indicate irritation of the lungs or bronchial tubes. There are a variety of conditions, which may tend to increase the functions of respiration. The respiration may be irregular and imperfect, as in tuberculous condition of one or both lungs, or from a valvular disease of the heart and inflammation of the pleura.

The menses are deranged in many diseases. They may be scanty or they may be profuse. In some instances they are entirely suppressed. They are at times changed in quality, and the period of their return may be irregular. When the catamenia is scanty, it either indicates a diseased condition of the ovaries or deficient nutrition. Suppression

of the menses may indicate a variety of opposite conditions. It may depend upon pregnancy, upon nursing, or upon age. It may exist in any of these cases without inducing disease. The menses may be suppressed by the extreme exhausted condition of the system, as in the last stage of phthisis, dropsy, &c. Or they may be suppressed by sudden exposure to cold or damp during the catamenial flow. The menses may also be vicarious, making their exit from the system through the lungs, stomach, bowels, &c. A change in the quality of the menses denotes disease of the uterus, or ovaries, or a scrofulous diathesis. Excess of the menses indicates a chronic inflammation of the lymphatic glands of the uterus, spermatorrhœa, &c.

SIGNS FROM THE URINE.

Healthy urine, when recently voided, has very nearly the temperature of the body; it is of a light yellow color, emits a peculiar aromatic odor, has a bitter saline and pungent taste, and a slight acid reaction; its specific gravity is about 1.018. From 90 to 93 parts to 100 of healthy urine is water, the remainder is made up of uric acid, saline and organic matter.

About $2\frac{1}{4}$ oz. of solid nitrogenized and uric matter is thrown off from the kidneys every twenty four hours. If the urine be acid, it will redden blue litmus paper; if it be alkaline, it will turn red litmus paper blue; if neutral, it will have no effect on the color of either. If the urine contains albumen, heat or nitric acid will cause it to coagulate, and give the urine a thick milky appearance. If the urine contains blood, heat or nitric acid will cause it to lose its transparency. If it contains bile, nitric acid will turn it green; if it contains uric acid, nitric acid will cause it to look dark, and precipitate a brownish sediment. If it contains sugar, it may be ascertained by evaporating a small quantity to the consistency of molasses, which will

have a sweet taste. A milky appearance may be caused by mucus, albumen, or ammonia. If it contains ammonia, nitric acid will cause a brisk effervescence; if it contains mucus or albumen, nitric acid will cause it to coagulate. Dr. Bird states, that if the sediment of morbid urine be white, and the urine acid, it consists mostly of urate of ammonia; but if it should disappear by heat, it is phosphate of ammonia. If a deposit be made of any color inclining to dark pink, or red, it is almost sure to be urate of ammonia, unless visibly crystalline, in which case it consists of uric acid. When the urine contains albumen, it indicates granular degeneration of the kidneys, or Bright's disease, unless it is connected with low forms of fevers, or in certain forms of heart disease. If the urine contains sugar, it indicates mal-assimilation or diabetes mellitus. A gritty sediment denotes a tendency to some of the forms of gravel. Mucus in the urine is usually owing to the enlargement of the prostate gland. Pus in the urine indicates abrasion of the bladder, kidneys, or urethra. Bile in the urine indicates a re-absorption of the bile from the liver, or that the liver fails to secrete the bile from the blood. This symptom is present in most forms of intermittent fever, jaundice, disease of the liver, &c.

THE FÆCES AS INDICATING DISEASE.

The inspection of alvine evacuations is of great importance in making up the diagnosis of disease. Where the bile is deficient, they are of a light ash color; if there is an excess, they are quite yellow. A red appearance of the stools indicates passive congestion; if red and thin, they indicate hyperæmia. If they are of a bloody mucous character, inflammation of the colon is indicated. When the stools are bloody in typhoid fever, they indicate ulceration of the glands of the bowels. When the fæces are very thin, and of a rice color, deep capillary congestion is indicated, as in cholera, cholérine, &c.

The condition of the mind should also be taken into consideration in diagnosis. To what extent the mind controls or influences the morbid tendencies of the body, is difficult to determine; but, that it has a powerful influence, not only in increasing the severity of morbid phenomena, but also of controlling it, is a fact too apparent to every observing physician to need comment. The conditions of mind, however, which contribute to the amelioration or increase of organic disease, are as yet but imperfectly understood. Kossuth stated, in one of his addresses before the American people, that while lying very low with fever, not having been out of bed for a considerable length of time, he received very important intelligence, upon which he arose, and entered at once upon active duties, without feeling any further embarrassment from his disease.

Instances are of almost daily occurrence, in which patients, who have for a long time labored under some low chronic disease, hear of a new remedy, which, if taken, is sure to remove it; and if taken at the time when the mind is most positive, for a time, at least, all the symptoms undergo improvement.

There are other instances of the most violent mental and physical agonies being relieved by the supposed virtue imparted to a glass of water or a bread-pill by a clairvoyant, or so-called spiritual medium, magnetic passes, &c. These things may appear to the novice in observation, absurd; yet they are living facts which must be met and should be investigated. This class of cures is not confined to the nervous and weak alone; but the athletic are frequently the passive subjects of these mysterious operations of the human mind. Even infants, whose minds are not susceptible of imaginary impressions, are said by the best of authority, to have disease controlled by the action of other minds. A circumstance was related to me to-day by a gentleman of undoubted veracity, of a child while laboring

under a protracted brain affection, being relieved in a few hours by one who claimed to be a spiritual medium. He magnetized a glass of water, as he stated, and by giving a teaspoonful every five minutes, the child was relieved. Another instance was related, of a similar glass of water acting as a cathartic in fifteen minutes, although there was obstinate costiveness at the time. Mental impressions, as affecting disease, have been noticed from the earliest history of medicine until the present time.

The mystic ceremonies of the Esculapians, the incantations of Galen, the rites and ceremonies of Avicenna, were another mode of producing the same results. The effects of Indian charms, the supposed power of the seventh son, of men born with a caul over the face, of touching a dead body for the cure of cancers, of taking water, in which sugar pills have been placed, are all examples of the effect of the mind over the diseases of the body.

While the mind may be thus beneficially directed upon diseased organs of the body, it frequently has an opposite tendency. It is a familiar fact, that nearly every disease that affects the human family, may be, and is occasionally induced by a perverted action of the mind upon the body. Fevers are frequently caused by a long continued exercise, or by powerful emotions, of the mind.

Phthisis is frequently induced in persons of a consumptive tendency, by constantly anticipating it. Cholera is not only induced, but its fatality increased, by the despondent mind. Disappointments cause loss of appetite, fever, changes of the urine, &c.; diarrhæa, pains in the head, &c., may be caused by mental impressions. One of the most remarkable instances of the influence of the mind over the body, in producing morbid changes, is related by Dr. Cheyne, of Col. Townsend, who could at any time produce all the phenomena of death, not only arrest-

ing circulation, respiration, &c., but would remain in this state for hours, and then by an effort of the will, be restored to his natural condition.

He carried his last experiment too far, and it resulted in actual death. The limits of this work will not allow me to enter further into the investigation of the subject. The above facts are sufficient to give some idea of the influence of the mind over matter, and the physician who would treat disease skilfully, must seek to investigate such facts, and as far as possible, to understand their cause and study their effects. The condition of the mind, whether diseased or healthy, with all its manifestations, should be taken into account. The condition of the skin, the temperature of the body, the temperament of the patient, his peculiar idiosyncrasies, together with his habits of living, occupation, external influences, &c., should be considered, before he assumes the responsibility of administering medicine, for the removal of disease.

A LIST
OF
SOME OF THE PRINCIPAL REMEDIES
USED BY
THE AMERICAN ECLECTIC PROFESSION,
ALSO THE METHOD OF
PREPARING AND USING THE SAME.

Aconitum Napellus.

Common name, Monk's-hood. This is an European plant. The tincture of the leaves is the preparation mostly used by eclectic physicians, in doses of from one to five drops, repeated at intervals of from one-half hour to an hour. It is used in all fevers and inflammations of an asthenic character. It is an active diaphoretic and sedative to the circulation, and at the same time increases the nervous forces. There is no remedy known, which possesses greater power to arrest typhoid and kindred fevers in their incipient stages. In peritoncal inflammation, the tincture of Aconite is of the greatest importance, frequently controlling the disease in a very few hours. It may also be used in dysentery, erysipelas, cerebral congestion, croup, hooping cough, &c.

Much care should be observed in preparing the tincture, which should be made from the recently dried leaves, in proportion of two ounces of dried leaves to one pint of diluted alcohol. After standing fourteen days, it should be strained and bottled for use. The active principle of

the plant is the aconitine, which may be used in all cases where the tincture is indicated. It should be triturated, one grain to ten of powdered sugar, and one grain of the trituration is a dose, repeated as indicated. The properties are the same as the tincture.

Asclepin

Is the active principle of the *Asclepias Tuberosa*. Common names, White Root, Pleurisy Root, &c. The *Asclepin* is the preparation mostly used. It should be triturated, one grain to ten of white sugar. From three to four grains is a dose. It is tonic, expectorant, diaphoretic and diuretic. It is used in pleurisy, pneumonia, phthisis, bronchitis and low forms of fever. The White Root is used in the same disease in the form of syrup and tincture.

Apocynin

Is the active principle of the *Apocynum Andro-sæmifolium*. Common name, Bitter Root. The *Apocynin* is the preparation mostly used. It is diuretic, emetic and anthelmintic. It is used in dropsy, dyspepsia, constipation, diabetes; and for worms, congestion of the uterus and scrofula. It is used with good effect for worms in the rectum. It should be triturated, one grain to ten of sugar, of which three to five grains is a dose.

Alnuin

Is the active principle of the *Alnus Serrulata*. Common name, Swamp Alder.

The *Alnuin* is the preparation used. It is employed in intermittent and remittent fevers, in chronic indurations of the liver, in necrosis, cancer, &c.

It should be triturated, one grain to ten of sugar, and from two to three grains given at a dose.

Aletrin

Is the active principle of the Aletris Farinosa. Common name, unicorn, star grass, &c.

The Aletrin is the preparation mostly used. It is anti-periodic, stimulant, nervous, tonic, and is a valuable alterative for the uterus, ovaries and kidneys. It is a remedy greatly valued in most affections of the uterus and kidneys, in irregularities of the menses, prolapsus uteri, passive congestion, resulting in leucorrhæa, &c. Also in diabetes, and Bright's disease of the kidneys, it may be used to much advantage. It is also valuable in most nervous affections.

It should be triturated, ten grains to the one hundred; from one to three grains of the trituration is a dose.

Althæa Officinalis.

Common name Marshmallow. It is a mucilaginous diuretic, and is best used by adding a small quantity of the pulverized root to cold water. It should be used in all forms of fever in the active stages, and in all diseases where a mucilage and diuretic is indicated.

Amaranthus Hypochondriacus.

Common name Red Cock's-comb. It is alterative, tonic, and astringent; is mostly used in the form of a warm infusion, and is beneficial in scrofulous consumption, also in diarrhæa, aphthous sore mouth, &c. The dose of the strong tea is a tablespoonful every half hour.

Ammoniæ Hydrochloras.

Common name, Muriate of Ammonia. It is diuretic, stimulant, alterative and resolvent. When triturated, it is of much value mixed with Podophyllin, owing to its resolvent and alterative powers, breaking down old adhesions, soft-

ening indurated livers, operating with great efficiency in all cases where such remedies are indicated. It may be given in powder or syrup. The dose is from one to ten grains every two or three hours.

Apium Petroselinum

Common name, Parsley. The root is the part mostly used, in the form of a strong decoction. It is diuretic, aromatic, stimulant, and may be used in dropsies, incipient phthisis, retention of urine, &c.

Apocynum Cannabinum.

Common name, Indian Hemp. It is hydrogogue, cathartic, diuretic and nervine. It is used in dropsies, liver complaint, bronchitis, scrofula, and is almost a specific for neuralgia. The root is the part employed, and as the active principles have but just been obtained, a strong decoction is now mostly used. Dose of a strong decoction one tablespoonful every half hour. The Hydro-alcoholic extract, as prepared by Tilden & Co., may be used in two or three grain doses, in the place of the decoction.

Arnica Montana.

Common name, Leopard's-bane. This is indigenous to the mountainous districts of Europe. It is antiperiodic, tonic and stimulant, and in large doses acts as an alterative cathartic. The tincture is the preparation principally employed. It is used in intermittent fevers, in aphthous conditions of the mucous surface, and in most forms of eruptive diseases. Externally, the tincture is used in the form of a liniment in all cases of bruises, sprains, &c. A dose of the tincture is from five to ten drops every two or three hours as an intermittent, and should be used between the paroxysms. For ulceration of the mucous surface, the dose is from one to five drops three or four times a day.

Ampelopsis

Is the active principle of the *Ampelopsis Quinquefolia*. Common name, Woodbine. The Ampelopsin is the preparation mostly used. It is one of our most reliable alteratives, acting with great certainty and power upon the lymphatic system, removing scrofula, syphilis, and mercurial taint, with great promptness. When used for syphilis, it should be combined with Iodide of Potassium and Phytolaccin. It should be triturated, ten grains to one hundred of sugar, dose from five to ten grains. The crude article is used in the form of a syrup, for the same disease.

Baptisin.

This medicine is prepared from the *Baptisia-Tinctoria* (common name, Wild Indigo Weed. Its medical properties are antiseptic, emmenagogue, and alterative; it is one of the metastatic remedies used in typhoid fever; is also used to good advantage in scrofula. As an emmenagogue, it is quite efficient, and may be used in all cases where such a remedy is indicated. Triturate ten grains, to one hundred of sugar, of which from five to ten grains is a dose.

Belladonna.

Common name, *Deadly Night Shade*. The extract is the preparation mostly used. It should be triturated, by adding one grain of the extract, to one hundred grains of White Sugar. Belladonna thus prepared, is a specific for simple *scarlet fever*, and is a valuable remedy in other forms of the disease, in connection with Hydrastin, &c. It is also valuable in nervous headache, neuralgia, and erysipelas. Dose of the trituration, is from one to three grains, diluted in a tablespoonful of soft water.

Bryonia Alba.

Common name, Wild Hops. The extract is the preparation mostly used. It should be triturated five grains of the extract, to one hundred grains of White Sugar. Thus prepared, the *Bryonia* is used in the advanced stage of typhoid fever, malignant dysentery, and the suppurative stage of internal inflammation.

Bebeerine.

The sulphate of Bebeerine is the active principle of the bark from the Bebeeru, a tree which is indigenous to India. The Bebeerine is one of the most important anti-periodics known; and by many, it is deemed superior to the sulphate of quinine. It is used in *intermittent* and *remittent* forms of fever. Also in *neuralgia*, *strumous ophthalmia*, *leucorrhœa*, *intermittent headache*, &c. Dose, from one to three grains, may be given every two or three hours, until forty or fifty grains are taken. It may be repeated as often as indicated.

Bidens Bipinnata.

Common name, Spanish Needles. A watery infusion is the form in which this article is mostly used. It is emmenagogue, tonic, and expectorant. It is used in dysmenorrhœa, amenorrhœa; also in chronic pneumonia, jaundice, &c. Dose of the strong infusion is, from one to two tablespoonfuls every three or four hours.

Caulophyllin.

The caulophyllin is obtained from the *Blue Cohosh*. It is *diuretic*, *diaphoretic*, *emmenagogue*, and *tonic*. It is used in all uterine diseases dependent on debility of that organ. It is also used in acute and chronic rheumatism.

The caulophyllin should be triturated ten grains, to the hundred of white sugar; from three to five grains of the trituration is a dose, repeated as indicated.

Cerasin.

The cerasin is prepared from the bark of the *cerasus virginiana*, choke cherry. Properties and use: Cerasin is *antiperiodic*, *astringent*, and *tonic*. It is used in intermittent and remittent fevers, in chorea, spermatorrhœa, and dysentery. It should be triturated ten grains, to the hundred of sugar, and from five to ten grains given for a dose.

Chelonin.

The chelonin is obtained from the *snakehead* or *balmony*. Medical properties and use. Tonic and alterative. It is used in indigestion, hypertrophy of the liver, chronic diarrhœa, &c. It is to be triturated ten grains, to a hundred of sugar, of which from two to five grains is a dose.

Cornin.

Obtained from the *Cornus Florida* or *Dogwood*. Medical properties and use: Antiperiodic and tonic. It is used in all cases where quinine is recommended. In low forms of fever it is preferable to quinine, on the account of its tonic property in connection with its antiperiodic. Dose not triturated is from one to three grains.

Corydalin.

The corydalin is derived from the *Corydalis Formosa*. Common name, Turkey Pea. This remedy is one of the most valuable antisypilitics known to the medical profession. It is also very valuable in the treatment of scrofula and eruptive diseases. It should be triturated ten to the hundred of sugar, and from one to five grains given at a dose

Cypripedin.

The cypripedin is prepared from the *Lady's Slipper* or nerve root. Cypripedin is nervine, tonic, and antispasmodic. It is used in all nervous and spasmodic diseases. In chronic ague, in combination with Cerasin, it is a remedy of much value. It is one of the ingredients of the intermittent drops. The cypripedin should be triturated ten grains to the hundred, and from five to ten grains given for a dose.

Cinchonin.

Cinchonin is commonly obtained from the pale Peruvian Bark. Its medical properties are similar to the quinine, and it is used in all diseases in which the quinine is admissible. Dose is from three to five grains.

Collodion.

Collodion is an ethereal solution of Gun Cotton. It is used to form an external protection to abraded surfaces. Also as an external application in *erysipelas*. It should be applied with a small sponge and repeated as indicated.

Cimicifugin.

The cimicifugin is the same as macrotin. It is the active principle of the *Cimicifuga Racemosa*. It is a tonic, nervine, and antiperiodic. The cimicifugin is very extensively used in all uterine affections, in rheumatism, chronic ague, &c. It should be triturated ten grains to the hundred of sugar before being used. From two to ten grains of the trituration is a dose, repeated as indicated.

Chinoidine.

The Chinoidine is one of the active principles of the cinchona. It is tonic, antiperiodic and alterative, and is used in all cases where Quinine is recommended. By some it is supposed to be much better than Quinine, on account of its alterative and tonic properties.

Capsicum.

Cayenne pepper is an active stimulant, and is used to great advantage in all low forms of fever, also in chronic dyspepsia, &c. Dose from one to five grains.

Capsicum Oil.

This is an oleo-resinous substance which contains all the active properties of the crude pepper, and is used for the same purpose. It should be triturated with white sugar, ten grains to the hundred. Dose from three to five grains, repeated as often as indicated.

Digitalin.

This medicine is derived from the *Digitalis Purpurea*. Common name, Foxglove. Properties and use: The *digitalin* is *diuretic*, *sedative* and *antiphlogistic*. Owing to the sedative influence of the digitalin over the heart and arteries, together with its almost specific influence over the lymphatic system, it is much used in all cases of a febrile character, accompanied with an accelerated pulse and an obstructed condition of the secretions. It is also used in dropsical effusions, asthma, rheumatism, disease of the heart, &c. It should be triturated, five grains to the hundred of white sugar, and from one to three grains of the powder given at a dose.

Dioscorin.

The Dioscorin is the active principle of the *Dioscorea Villosa*, or *wild yam*. The *dioscorin* is a specific remedy for bilious colic. It is also used in other spasmodic diseases. It operates most efficiently by being triturated ten grains to the hundred of sugar. The dose of the trituration is five or ten grains every five or ten minutes, until relief is produced.

Euphorbin.

The *Euphorbin* is derived from the root of the *Euphorbia corollata*. Common name, Bowman Root. The *Euphorbin* is emetic, cathartic, diaphoretic and expectorant. It is used in the forming stage of fever, in dropsy, dysentery and chronic affections of the liver. As an emetic, from one to three grains should be added to one half pint of warm ginger tea, and one tablespoonful taken every five minutes until it produces free emesis. As an alterative, it should be triturated ten grains to the hundred of white sugar, and from two to five grains of the trituration given as a dose, and repeated three or four times a day.

Eupurpurin.

The *Eupurpurin* is obtained from the *Eupatorium Purpureum*. Common name, Queen of the Meadow. The *Eupurpurin* is resolvent, diuretic and stimulant. It is used in gravel, strangury, gout, dysentery, scrofula, necrosis, cancer, and in chronic affections of the uterus. It should be triturated ten grains to the hundred, and from three to five grains of the trituration given as a dose.

Eupatorine.

The *Eupatorine* is prepared from the *Eupatorium Perfoliatum*, or Boneset. It is antiperiodic, alterative, and in large doses emetic and purgative. It is used in all diseases where such remedial properties are indicated, such as ague, dyspepsia, &c. It should be triturated ten to the hundred, and from one to five grains of the trituration is a dose.

Euonymine.

The *Euonymine* is obtained from the *Euonymus Atropurpureus*. Common name, Wahoo. The *Euonymine* is one of the most valuable alteratives known to the profes-

sion. Its specific tendency is towards the liver, upon which it acts with far more certainty than mercury or any other known remedy. It may be used in all chronic affections of the liver, and wherever a thorough alterative and tonic is indicated. It operates best by being triturated with sugar, 100 parts of sugar to 10 of Euonymine. Dose from five to ten grains of the trituration.

Erigeron Philadelphicum.

Common name, Colt's Tail, Rag-weed, &c. Erigerin is a concentrated preparation obtained from the plant, and is tonic, astringent and diuretic. Like other concentrated remedies, it operates best by being triturated with sugar. From five to ten grains of the trituration is a dose. The volatile oil of *Erigeron Philadelphicum* is the most valuable medical part of the plant. It is anti-hemorrhagic and diuretic, used in all cases of hemorrhage, and is a remedy of inestimable value. Prof. Sites, who has had very large experience with this article, regards it as a specific, in all cases of uterine hemorrhage. It is also used in hæmoptysis, dysentery, gravel and rheumatism. Dose from five to ten drops as often as indicated.

Elaterin

The *Elaterin* is the active principle of the *Momordica Elaterium*. Common name, *wild* or squirting *Cucumber*. The *Elaterin* is a powerful hydragogue cathartic. It is used in dropsy, and as a revulsive to some cerebral affections. It should never be used without trituration. It should be triturated by adding ten grains to the hundred of sugar. Dose of the trituration is from one to three grains.

Gelsemin.

Obtained from the root of the *Gelsemium Sempervirens*. Common name Yellow Jessamine, Woodbine, &c. Pro-

perties and uses: Antiperiodic, antispasmodic and sedative. It is used in all fevers where there is not congestion of the brain. It is also used in pleurisy, pneumonia, rheumatism, acute and chronic. The *Gelsemin* possesses great power over the circulation, reducing the pulse from a hundred or a hundred and thirty, to sixty or seventy in the course of one or two hours. It also excites perspiration and quiets nervous excitement, hence it has been very extensively used in neuralgia. The *Gelsemin* should be triturated ten grains to the hundred of sugar, and from one to two grains of the trituration given at a dose. The tincture of the crude root is also used in the same diseases. Dose of the tincture is from 15 to 20 drops.

Geranin.

The *Geranin* is obtained from the *Geranium Maenlatum* or Crane's Bill. The *Geranin* is one of the most powerful astringents known to the profession, and is used in all cases where a vegetable astringent is indicated. It may be used with or without trituration. Dose of the triturated is from three to five grains; of the crude, from two to three grains is a dose.

Helonin.

Obtained from the *Helonias Dioica*, or Unicorn Root, Starwort, &c. The *helonin* is tonic, diuretic, and nervine. There is no medicine known, which exerts a more salutary influence over the assimilating powers of the system, than the *helonin*. Hence it is an invaluable remedy in the treatment of diabetes: it is also used in leucorrhæa, and in all cases where passive congestion of the uterus appears to be the prominent cause of the ailment. The *helonin* should be triturated ten grains of *helonin* to one hundred grains of White Sugar. Dose from five to ten grains.

Hydrastin.

The *hydrastin* is obtained from the *Hydrastus Canadensis*, or Golden Seal. The *hydrastin* is a pure tonic, and appears to operate equally well upon all the tissues of the body. Hence it is very extensively used in all low forms of fevers, in all cases of debility, &c. A much less quantity produces the same effect by being triturated one grain to ten. Of the triturated from one to three grains is a dose, repeated as indicated.

Hyosciamin.

The *Hyosciamin* is obtained from the *Hyosciamus Niger*, or Henbane. It is anodyne, antispasmodic, and laxative. It is used in neuralgia, gout, asthma, phthisis, irritability of the urinary organs, and nervous affections. It should be triturated one grain to ten of sugar, and from one-half to one grain of the trituration is a dose.

Irisin.

The *Irisin* is obtained from the *Iris Versicolor*, or Blue Flag. It is alterative, purgative, diuretic, and anthelmintic. It is used in syphilis, chronic hepatitis, scrofula, rheumatism, &c. The trituration of this remedy is ten to the hundred, and from five to ten grains is a dose.

Jalapin.

The *Jalapin* is obtained from the *Ipomæa Jalapa*, or Jalap. The *Jalapin* is a hydragogue cathartic, and is used in dropsy, congestion of the liver, &c. The dose of the triturated is from five to ten grains.

Juglandin.

The *Juglandin* is prepared from the *Juglans Cinerea*, or Butternut. It is cathartic and alterative. It appears

to exert most of its influence upon the dermoid tissues, where it is used in cutaneous diseases with very happy results. It is triturated the same as the other concentrated remedies: give it in ten or twelve-grain doses three times in the twenty-four hours.

Leptandrin.

The *Leptandrin* is prepared from the *Leptandra Virginica*, *Culver's Physic*, or *Black Root*. It is alterative, tonic, and hepatic. It is used very extensively as an alterative to the mucous surface, in inflammation of the glands of the bowels, in chronic diarrhæa, and dysentery. It is also used in scrofula and chronic bronchitis. The leptandrin is to be triturated ten to the hundred, and from ten to twenty grains given at a dose.

Lobelin.

The *Lobelin* is obtained from the *Lobelia inflata*. It is emetic, diaphoretic, antispasmodic, and expectorant. The lobelin is one of the most valuable medicines in the materia medica. It is used in all cases where a remedy possessing those properties is indicated. As an antispasmodic, it may be used in all cases of convulsions, croup, &c. Also in asthma and spasmodic croup. As an emetic, it may frequently be indicated in the formative stage of fevers, dysentery, jaundice, lung fever, &c. As an expectorant, it may be used in chronic catarrh, pneumonia, &c. The lobelin should be triturated ten to the hundred of sugar, of which from one to ten grains may be given as an expectorant, from ten to forty as an emetic, and from five to ten as an antispasmodic.

Lupulin.

Lupulin is obtained from the *Humulus Lupulus*. Common name, Hops. The *lupulin* is tonic, anodyne, and

anaphrodisiac. It is used very extensively in all nervous diseases in the place of morphine, for which it serves as a good substitute; it is also used in spermatorrhœa and chronic gonorrhœa, for which it operates with great efficiency. For loss of sleep it serves all the purposes of morphine. And of late it is becoming quite a popular remedy for ague; and its power over that disease leads me to infer it to be quite a strong antiperiodic. It may be triturated, and from five to ten grains given as a dose, and repeated as indicated.

Lycopus Virginicus.

Common name, Bugle weed. It is used with great effect in hæmoptysis, in diabetes, and phthisis; it is also recommended in leucorrhœa, &c. The preparation mostly used is the infusion, which should be made strong, and one tablespoonful given at a dose; to be repeated as indicated.

Myricin.

The *Myricin* is obtained from the *Myrica Cerifera*. Common name, Bayberry. It is astringent and alterative. It is used in scrofula, dysentery and follicular stomatitis. There are but few remedies which exert a more salutary influence over a diseased condition of the mucous surface than this. It is also used externally upon indolent ulcers. It should be triturated ten grains to one hundred, of which from five to ten grains are a dose. When used externally, the triturated powder should be sprinkled upon the surface, followed by an elm poultice.

Morphia.

This article is prepared from opium, and contains its narcotic properties. It is used to allay pain and to quiet nervous excitement. Although it is a valuable remedy when properly applied, it should be used with much caution, owing to its paralyzing properties. Dose from one sixteenth to one half a grain.

Menispermin

Is the active principle of the *Menispermum Canadensis*, or yellow parilla. It is sialagogue, tonic, alterative, diuretic, and in large doses purgative. It is a remedy of great value in the earliest stages of phthisis. It is also used in chronic enlargement of the liver and spleen. In combination with other remedies, it is valuable in syphilis, scrofula and meningitis. It should be triturated ten grains to the hundred, and given in from five to ten grains per dose.

Phytolaccin

Is the active principle of the *Phytolacca Decandria*. Common names, Poke Root, Garget, Skake Root, &c. It is alterative, purgative, diuretic and antisyphilitic. This remedy possesses almost specific power over syphilis. It is used in tuberculous affections of the liver and spleen; also in cancer and scrofulous cachexia. It is used externally for indolent scrofulous ulcers, necrosis and cancers. I have found an ointment of this article valuable in obstinate hemorrhoids. For internal use it should be triturated ten grains to one hundred of sugar. In syphilis, from three to five grains of the trituration should be given three or four times a day. If there should be chancre, a small quantity of the untrituated should be spread upon it. If this course is persisted in until a constitutional impression is made by the Phytolaccin, a cure will generally be effected. In scrofulous and hepatic diseases, one or two grains of the triturated should be given two or three times a day.

Podophyllin.

This is obtained from *Podophyllum Peltatum*. Common names, May Apple, Mandrake. It is alterative, emetic, cathartic and resolvent. The action of Podophyllin upon the glands is somewhat like the mercurials.

When given alone, as a cathartic, its action is very slow, requiring from six to twelve hours. As an alterative, it is used in all cases of hypertrophy and local congestion. It exerts a specific influence over the liver, stimulating it to increased secretion of bile. As a resolvent, it is used in adhesive inflammation, following pneumonia, peritonitis and pleuritis. It is used to defibrinate the blood in alterative doses, and as a general stimulant to the absorbents. It should be triturated ten grains to the hundred. From one to two grains are used as an alterative, and from two to five grains acts as a cathartic.

Populin.

The *Populin* is obtained from the *Populus Tremuloides*, or Quaking Aspen. The *Populin* is tonic, alterative, vermifuge and stomachic. It is used in dyspepsia, costiveness, hysteria, &c. It is to be triturated, and from three to five grains given as a dose.

Prunin.

The *Prunin* is obtained from the *Prunus Virginiana*. Common name, Wild Cherry. It is a tonic expectorant and nervous sedative. The *Prunin* is a remedy well calculated to act beneficially in the early stage of phthisis, and in chronic bronchitis. It has been used lately as an antiperiodic with good success. The *prunin* should be triturated, ten of *prunin* to the hundred of sugar, and from five to ten grains given at a dose.

Ptelin.

The *Ptelin* is obtained from the *Ptelia Trifoliata*. Common name, Swamp Dogwood. The *Ptelin* is tonic and stimulant. It is a remedy of much value in diabetes, in chronic diarrhæa and indigestion. It should be triturated ten parts to the hundred of sugar, and from five to ten grains given at a dose.

Rhusin.

The Rhusin is obtained from the *Rhus Glabra*. Common name, Upland Sumach. It is a valuable remedy in purpura, scurvy and dysentery. It is also used with good effect, as an external remedy, in indolent ulcers and piles. For internal use it should be triturated as the other concentrated remedies, and from one to five grains of the trituration given at a dose. As an external remedy for ulcers or piles, it should be made into an ointment with Balsam of Fir.

Rumicin.

The Rumicin is obtained from the *Rumex Obtusifolius*, or Yellow Dock. It is a remedy of great value in constitutional cancerous affections, and in scrofula. It should be triturated and given in three or four grain doses.

Sanguinarin.

The Sanguinarin is obtained from the *Sanguinaria Canadensis*. Common name, Blood Root. The Sanguinarin is one of the most valuable remedies known, in the treatment of pseudomembranous croup. It has proved as much of a specific for that disease, as Quinine has for ague. I have seen it used in a great number of cases, and have never known a single failure. It is also used in pneumonia with good effect. As a mild alterative and sedative, it is also valuable. Externally, sanguinarin is used in open cancer with good effect. When used for the croup, it should be made into an acetic syrup, by adding twenty grains of Sanguinarin to four ounces of vinegar; steep and add one ounce of sugar to form a syrup. Dose one teaspoonful as often as indicated. As an alterative and expectorant, it should be triturated ten grains to the hundred of sugar, and from three to five grains given at a dose. Externally, for cancer, it is mixed with the white of an egg, and applied in the form of a paste.

Scutellarin.

The Scutellarin is prepared from the *Scutellaria Lateriflora*, or Scullcap. It is one of the most valuable nerve tonics and antispasmodics. It is a specific in nervous chorea, and very valuable in all other forms of nervous affections. It is one of the ingredients of the intermittent drop. In the low stage of typhoid fever, it allays the nervous irritation with great efficiency. I am in the habit of using the scutellarin in all cases where I formerly used morphine. It should be triturated ten to the hundred, and given in three or four grain doses.

Senecin

Is obtained from the *Senecio Gracilis*. Common name, Life Root. The Senecin is one of the most efficient known remedies in irregularity of the menses, and appears to act specifically upon the uterus, relieving that organ of congestion and inaction. From the efficiency with which the medicine relieves uterine derangement, its use is mostly confined to that class of cases. The dose of the triturated is from three to six grains.

Staphylea Trifolia.

This medicine is used in the form of a cold infusion. The bark of the root is the part mostly employed. It is antiperiodic and tonic, and is used in the treatment of intermittent fever and debility of the stomach. Dose, one or two tablespoonfuls of a strong infusion.

Stillingia Sylvatica.

Common name, Queen's Root. The Stillingian is a concentrated preparation prepared from the root of the *Stillingia Sylvatica*. This preparation, however, does not contain all the active medical properties of the plant.

Hence the crude article is mostly used in the form of a syrup. The syrup is extensively used in syphilis, scrofula, and mercurial diseases. By those who are the most familiar with its medicinal properties, it is believed to possess more power over mercurial diseases than any other. In order to obtain the best effect, its use should be persisted in for a considerable length of time. Dose of the simple syrup, one teaspoonful three or four times a day.

Trillin.

The *trillin* is obtained from the root of the *Trillium Pendulum*. Common name, Beth Root. The trillin is astringent, styptic, alterative, and tonic. It is used in uterine hemorrhage, leucorrhœa, and prolapsus uteri. The trillin should be triturated ten grains to the hundred of sugar, and from five to ten grains of the trituration is a dose.

Veratrin.

The *veratrin* is obtained from the *Veratrum Viride*. Common name, Swamp Hellebore. It is sedative, diaphoretic, alterative, diuretic, and in large doses emetocathartic. There are but few remedies by which the heart's action can be so readily controlled as by this. Hence in all sthenic disease in which there is great increase of circulation, as in miasmatic fevers, the *veratrin* constitute one of the most important remedies in use. In many cases of intermittent, remittent, and bilious fevers, the *vetratrin* is the only remedy needed. It is also very valuable in the treatment of pneumonia, pleurisy, and bronchitis of a sthenic character. But where the powers of the system are feeble, and the disease of an asthenic character, the *veratrin* should not be given. As it proves too debilitating, a tincture made from the fresh root is also used in the same diseases as the *veratrin*. The *veratrin* should be triturated ten grains to the hundred of

sugar, and from one to three grains of the trituration given as a dose. Dose of the trituration is from three to ten drops.

Viburin.

The Viburin is obtained from the *Viburnum oxycocum*. Common name, High Cranberry. It is antiperiodic, tonic, and alterative. The *Viburin* is a valuable remedy in the treatment of ague and remittent fever. It is also valuable in periodic pneumonia and pleuritis. While it arrests the periodicity of pneumonia, it also facilitates expectoration. This remedy has proved highly valuable in obviating the casualties of pregnancy. It is frequently prepared in the form of a syrup and given under the name of mother's relief. When given in the form of a syrup, it should be prepared by adding one drachm to the pint of the syrup of sugar. Dose, one tablespoonful three times a day. Dose of the triturated from three to ten grains.

Xanthoxylin.

Obtained from the Prickly Ash. The Xanthoxylin is one of the most powerful diffusible stimulants known to the profession. When given in full doses, it produces effects upon the nerves as though slight shocks of electricity were passing through the system. From its powerful stimulating properties, it is used in all low forms of fever, in passive congestion, in cholera, diarrhæa, and dysentery. It is also a remedy of great value in congestive chills. It should be triturated ten grains to the hundred of White Sugar, and from five to ten grains is a dose. A tincture is made of the Prickly Ash Berries, by adding an ounce of the berries to one pint of brandy. Dose, one teaspoonful as often as indicated. It is used in the same diseases as the Xanthoxylin.

Peruvian Bark and its Alkaloids.

These medicines are without doubt among the most precious remedies known to the profession. And the prejudice which exists against them, is owing to their having been combined with mercury, arsenic, &c., in the allopathic practice. The cinchonas and their alkaloids are as innocent remedies, when properly used, as any other vegetable medicines. The active principles of the Peruvian Bark are Quinine, Cinchonin, Chinoidin, and Quinoidine. The medical properties of all these are very nearly the same, although the Quinine is much the strongest. They are all antiperiodics, and may be used in all cases where a periodicity is a symptom of the disease. Dose of the Quinine is from one to ten grains, of the other alkaloids from five to twenty grains.

Gossypium Herbaceum.

Commonly called Cotton Root. The hydro-alcoholic extract is the preparation mostly used. It is emmenagogue and antiperiodic. This extract is extensively circulated as a quack medicine for producing abortion. It is prepared in the form of pills. It is used in chlorosis, amenorrhæa, dysmenorrhæa, and in periodic diseases. Dose of the extract is from three to five grains.

The limits of this work will not permit me to further consider each separate remedy. I will therefore refer the reader to the *American Eclectic Dispensatory*, by John King, M. D., where all the resources of American Eclectic Physicians are fully considered. Formulæ for a few Eclectic compounds, will be given.

Mother's Cordial,

Or Compound Syrup of Partridge Berry, according to the American Eclectic Dispensatory. Take Partridge Berry, one pound, Helonias Root, High Cranberry Bark, Blue Cohosh Root, of each four ounces. Grind and mix the articles together, place the whole in a convenient vessel, cover them with fourth-proof brandy, and macerate for three days. Then transfer the whole to a displacement apparatus, and gradually add Brandy until three pints of spirituous tincture have been obtained, which reserve. Then continue the displacement with Hot Water until the liquid passes tasteless, add to this two pounds of Refined Sugar, and evaporate by a gentle heat to five pints, remove from the fire, add the reserved three pints Spirituous Tincture, and flavor with essence of Sassafras. This preparation, says Dr. King, is a uterine tonic and antispasmodic. It may be used in all cases where the functions of the internal reproductive organs are deranged, as in amenorrhæa, dysmenorrhæa, menorrhagia, leucorrhæa, and to overcome the tendency to habitual abortion. The dose is from one to four tablespoonfuls three times a day; pregnant females, especially those of a delicate or nervous system, will find an advantage in taking one or two doses daily.

Neutralizing Cordial,

Or Compound Syrup of Rhubarb and Potassa. Take of India Rhubarb and Bicarbonate of Potassa each one pound, good brandy one gallon, tincture the Rhubarb and Potassa for fourteen days, then express the tincture by pressure. Add the dregs to one gallon of water, and evaporate down to one half gallon; strain the liquor, and while it is hot dissolve in it four pounds of white sugar. After it gets cool, add six ounces of good peppermint essence. This

syrup is a valuable medicine in diarrhæa, dysentery, flatulency, and most chronic irregularities of the bowels. Dose is one teaspoonful repeated as often as indicated.

Antiscrofulous Syrup.

As prepared according to the Eclectic Dispensatory. Take Yellow Dock Root two pounds, bark of the root of False Bittersweet one pound, bark of American Ivy, *Ampelopsis Quinquefolia*, and Figwort, of each half a pound, refined sugar sixteen pounds; grind and mix the drugs together, place the whole five pounds in a convenient vessel, cover them with alcohol of 76 per cent., and macerate for two days. Then transfer the whole to a common displacement apparatus, and gradually add hot water until two pints have been obtained, which retain and set aside. Then continue the percolation, and of the second solution, reserve so much as contains a sensible amount of spirits, and evaporate the alcohol from it. Continue the displacement by hot water until the solution obtained is almost tasteless, and boil down this weaker infusion till it begins to thicken, or until when added to the balance remaining of the second portion after the evaporation of the alcohol, it will make twelve pints. To these two solutions combined, add sixteen pounds of refined sugar, and by heat dissolve, carefully removing the scum which arises as it comes to the point of boiling. Then, if it exceeds that quantity, evaporate the syrup with constant stirring to fourteen pints, remove from the fire, and when nearly cold add the two pints of tincture first obtained, and make two gallons of syrup. Each pint will contain the virtues of four ounces of the ingredients. It may be flavored with essence of wintergreen. It is used in all cases where an alterative is indicated in chronic hepatitis, rheumatism, syphilis, scrofula, cutaneous diseases, ulcers, white swell-

ing, rickets, necrosis, and every taint of the system. Dose from a teaspoonful to a tablespoonful three or four times a day.

Syrup of Stillingia.

R Queen's Root.....	3 lb.
Prickly Ash Berries.....	1½ lb.

1. Grind and mix the articles together, place the whole four pounds and a half in a convenient vessel, cover them with alcohol of 76 per cent., and macerate for three days. Then transfer the whole to a displacement apparatus, and gradually add alcohol until five pints of the alcoholic tincture have been obtained, which retain and set aside. 2. Continue the percolation, and of this second solution reserve as much as contains a sensible amount of spirits, and distil or evaporate the alcohol from it. 3. Continue the displacement by hot water until the solution obtained is almost tasteless, and boil down this weak infusion until when added to the second solution after the evaporation of its alcohol it will make twenty-four pints. 4. To these two solutions combined, add thirty-two pounds of refined sugar, and dissolve it by heat, carefully removing any scum which arises as it comes to the point of boiling, and if it exceeds twenty-eight pints, evaporate to that quantity with constant stirring. Then remove from the fire, and when nearly cold, add the four pints of reserved alcoholic tincture, and make four gallons of syrup, each pint of which will be equal to four ounces of the ingredients in medicinal virtue. This syrup is one of the most powerful alteratives known. It is used in all cases of syphilis, scrofula, mercurial and glandular diseases. Dose one teaspoonful three or four times a day. (This syrup is prepared according to the formula of the American Eclectic Dispensatory, John King, M. D.) The above formula is the best method of preparing the syrup of stillingia, and by

tincturing and carefully boiling, the strength may be obtained, and the syrup prepared and used as directed. For domestic practice, however, these syrups can be bought already prepared, as most druggists keep them for sale.

Acetic Syrup of Sanguinaria, or Blood Root.

R Blood Root in powder.....	3i.
Acetic Acid, or Vinegar.....	$\frac{1}{2}$ pt.
Water	$\frac{1}{2}$ pt.

Add the blood root to the vinegar and water mixed, and steep for two hours, then strain and add three pounds of white sugar. Simmer until a syrup is formed. This is the specific remedy for pseudo-membranous croup. It is also used in infantile pneumonia and bronchitis. Dose for croup is from one-half teaspoonful to one tablespoonful; but it should not be given in quantities sufficient to produce vomiting, unless there is imminent danger of suffocation; and then only sufficient to eject the mucus, adhering to the upper part of the bronchi and trachea.

Syrup of Marshmallow.

R Pulv. Marshmallow	3iij.
Warm Water.....	1 qt.

Add the marshmallow to the water and simmer for half an hour, or until the water is evaporated to one pint, then strain, and add three pounds of white sugar and form a syrup. This syrup is mucilaginous and diuretic. Four ounces of syrup of marshmallow, and one drachm of Iodide of Potassium, make a preparation of great value in empyema and dropsical effusions. Dose of the simple syrup, one tablespoonful every three or four hours, of the Syrup and Iodide of Potassium, one teaspoonful three times a day.

Compound Syrup of Stillingia.

℞ Take Stillingia Root, Root of Turkey Corn,
 each..... 2 lb.
 Blue Flag Root, Elder Flowers, and Pipsis-
 sewa leaves each 1 lb.

1. Grind and mix the articles together, place the whole seven pounds in a convenient vessel, cover them with alcohol of 76 per cent. and macerate for three days. Then transfer the whole to a displacement apparatus, and gradually add hot water until four pints of the alcoholic tincture have been obtained, which retain and set aside. 2. Then continue the percolation, and of this solution, reserve as much as contains a sensible amount of spirit, and distil or evaporate the alcohol from it. 3. Continue the displacement by hot water, until the solution obtained is almost tasteless, and boil this weaker infusion, until when added to the sound solution after the evaporation of its alcohol, it will make twenty-four pints. 4. To these two solutions combined, add thirty-two pounds of refined sugar, and dissolve it by heat, carefully removing any scum which arises as it comes to the point of boiling, and strain. When nearly cold add the four pints of reserved Alcoholic tincture, and make four gallons of syrup. Properties and use: The Compound Syrup of Stillingia is one of the most powerful and effective alteratives, and is extensively used by Eclectic practitioners in all cases of syphilis, scrofula, osseous, mercurial, hepatic, and glandular diseases, or in every case where an alterative is indicated. It is most commonly given with one ounce of Iodide of Potassium to each pint of syrup. The dose is a fluid drachm three or four times a day (American Eclectic Dispensatory, by John King, M. D.).

Syrup of Alum.

℞ Take of Pulverized Alum..... ʒi.
 Water 1 pint.

Heat the water until the alum is all dissolved, and add one pound of refined sugar, simmer until a syrup is formed, strain, and when it is cool it is fit for use. The syrup of alum is very valuable in whooping cough, in chronic catarrh, and the early stage of pulmonary consumption. It is also used in leucorrhœa and diabetes. Dose is from one to two teaspoonfuls three times a day as often as indicated.

Pulmonary Balsam.

Take of the Roots of Spikenard, Elecampane, Comfrey and Blood Root, of the leaves and flowers of Hoarhound, and of the bark of Wild Cherry, each one pound. These may all be ground and tintured by adding alcohol, water and sugar, sufficient to make three gallons of syrup. Or any portion of the above compound may be tintured in sufficient alcohol to cover them, when the drugs may be boiled until the strength is obtained, and the tincture and watery infusion may be mixed, and a sufficient amount of refined sugar added to make a thick syrup. The Pulmonary Balsam is one of the most valuable cough and expectorant syrups in use. It may be used in all cases of coughs and colds, also in bronchial and pulmonary affections. Dose is from one to two teaspoonfuls four or five times a day.

Bronchitis Drops.

Take the fluid extract of Rumex Crispus, Rhus Glabra, Hyosciamus Niger, Uvularia Perfoliata, and Cypripedium Pubescens; mix well together. The Bronchitis drops are valuable in chronic Bronchitis, Laryngitis, &c. Dose from five to ten drops, repeated as indicated.

Antibilious Physic.

℞ Take Pulverized Senna.....	1 lb.
Jalap.....	$\frac{1}{2}$ lb.
Ginger.....	1 $\frac{2}{3}$.

Mix. This mixture forms one of the most valuable purgatives in use. It is mild, yet efficient, and is well adapted to evacuate the stomach and bowels, whenever it is indicated. Dose five or ten grains every two or three hours until it operates.

Worm Mixture.

℞ Take Santonin	10 grs.
Podophyllin.....	2 grs.
Populin	10 grs.
White Sugar	30 grs.

Mix and triturate thoroughly, and bottle for use. Dose for a child from one to three grains every night on going to bed. The above mixture seldom fails to remove worms in children.

Lactin.

Lactin is the sugar of milk, and is very extensively used by some physicians to triturate their medicines with; but I have not been able to discover any advantage in the use of the lactin, over pure white sugar.

THE
DIFFERENT SYSTEMS OF PRACTICE.

THAT the reader may become familiar with the resources, not only of the American Eclectic System of Practice, but also with the practice of the Allopathist, Homœopathist and Hydropathist, I will here introduce a list of diseases, with their remedies, from the most approved authority of each system of practice. The Allopathic treatment I have given strictly according to Prof. Eberle, one of the most popular authors upon that system of practice. The Homœopathic practice is given according to J. Lourie, M. D., an author of great popularity among Homœopaths. The size of the dose and the trituration are given according to Jahr's and Gruner's Homœopathic Pharmacopœia. The Hydropathic treatment is given according to Shew, Trall, and other standard authorities.

ALLOPATHIC PRACTICE.

Intermittent Fever. — Treatment : — Emetics, opium blood-letting, nitre, camphor, sulphuric ether, magnesia, calomel and jalap, cinchona, quinine, potash, cloves, leeches, blisters, arsenic, sulphate of zinc, black pepper salivation.

Remittent Fever. — Treatment : — Blood-letting, cathartics, calomel and jalap, ipecac, nitre, salivation, epsom salts, castor oil, magnesia, opium, antimony, ammonia, cold water, leeches, blisters, balsam copaiva, sinapisms, warm bath, enemata, lemonade, quinine, gentian, serpentaria.

Yellow Fever.—Treatment:—Blood-letting, calomel, salivation, enemata, epsom salts, sponge with cold water, leeches, blisters, aperients, DIAPHORETICS, quinine, wine, ammonia.

Synocha or simple continued Fever.—Treatment:—Blood-letting, purgatives, soda, magnesia, antimony, jalap, cream of tartar, calomel, DIAPHORETICS, nitre, James's powders, digitalis, salivation, ipecac, sponging with cold water, blisters, cupping, leeches, enemata.

Synochus Fever.—Treatment:—The same as synocha throughout.

Typhus Fever.—Treatment:—Emetics, ipecac, calomel, gentle purgatives, castor oil, enemata, epsom salts, croton oil, salivation, blood-letting, effusions of cold water, diaphoretics, laudanum, nitre, wine, ammonia, camphor, opium, quinine, blisters, capsicum, serpentaria, camomile.

Glossitis, inflammation of the tongue.—Treatment:—Blood-letting, leeches, scarifying, incisious with scalpel, laxative enemata, blisters on the back of the neck.

Tonsillitis, Quinsy.—Treatment:—Blood-letting, scarifying the tonsils, cupping, an active purge, mild aperients, calomel, enemata, nitre, antimony, ammonia, liquorice, blisters, spirits turpentine, emollient poultices.

Parotitis, Mumps.—Treatment:—Keep the bowels open, diaphoretics, blisters, mercurial ointment, camphor, rubefacient liniments.

Acute Gastritis.—Treatment:—Blood-letting, leeches, blisters, mercurial ointment, mucilaginous drinks, vegetable acids, laxative enemata, opium, calomel.

Chronic Gastritis.—Treatment:—Leeching or cupping, blisters, tartar emetic ointment, sulphate of iron, hyosciamus, morphia, nitrate of silver, borax, Dover's powder, balsam of copaiva, syrup of poppies, purgative enemata.

Peritoneal Enteritis.—Treatment:—Blood-letting, purgatives, laxative enemata, calomel, castor oil, opium,

spirits turpentine, blisters, emollient poultices, digitalis, wine.

Dysentery.—Treatment :—Bleeding, purgatives, castor oil, calomel, laudanum, emetics, ipecac, diaphoretics, salivation, mucilaginous liquids, nitrous acid, sugar of lead, leeches, blisters, emollient poultices, balsam of copaiva, turpentine, enemata, dogwood bark, diet, rice, barley.

Chronic Enteritis.—Treatment :—Proper diet, castor oil, laudanum, leeches, blisters, tartar-emetic ointment, calomel, balsam of copaiva, spirits turpentine, sulphate of iron, nitrate of silver, hyosciamus, elm bark.

Acute Peritonitis.—Treatment :—Blood-letting, leeches, emollient poultices, active cathartics, castor oil, spirits turpentine, cream of tartar, calomel, jalap, blisters, leeches, salivation, opium, digitalis, wine.

Chronic Peritonitis.—Treatment :—Leeches, blisters, mercurial ointment, tartar-emetic ointment, emollient poultices, warm baths, castor oil, cream of tartar, Dover's powder.

Acute hepatitis.—Treatment :—Blood-letting, mercury, castor oil, leeches, salivation, blisters, opium, antimony, warm bath, nitro-muriatic acid, cicuta, tonic bitters, nitric acid, extract of conium.

Chronic hepatitis.—Treatment :—Blood-letting, mercury, leeches, salivation, blisters, emollient poultices, blue-pill, conium, laxatives, epsom salts, gentian, columbo, nitro-muriatic acid, white precipitate, setons.

Splenitis.—Treatment :—Blood-letting, purgatives, counter-irritants, warm bath, leeches, tartar-emetic, mercury, setons, hyosciamus, diaphoretics, antimony, muriate of ammonia, ipecacuanha, iodine.

Phrenitis, phrensy.—Treatment :—Blood-letting, leeches, cold water or ice, active purgatives, calomel, senna, blisters, nitre, antimony, digitalis.

Arachnitis, hydrocephalus.—Treatment :—Laxatives,

calomel, blue-pill, castor oil, blood-letting, leeches, manna, laxative enemata, spigelia, ipecac, salivation, mercurial ointment, blisters, ice, tartar-emetic ointment, James's and Dover's powder.

Cerebritis, softening of the brain. — Treatment: — Blood-letting, sinapisms, opium, cold to the head, blisters, calomel, salivation.

Peripneumonia. — Treatment: — Bleeding, leeches, digitalis, nitre, castor oil, emetics, cooling diaphoretics, muriate of ammonia, antimony, calomel, opium, camphor, ipecacuanha, expectorants, blisters, squills, tartar-emetic ointments, setons, conium.

Cynanche Laryngea, Laryngitis. — Treatment: — Blood-letting, leeches, blisters, emollient poultices, emetics, calomel, sinapisms to the feet, lunar caustic, alum, bronchotomy.

Cynanche Trachealis, Croup. — Treatment: — Bleeding, blisters, emetics, warm bath, mercurial purgatives, antimony, enemata, salivation, ipecac, friction with turpentine, polygala senega.

Acute bronchitis. — Treatment: — Blood-letting, enemata, castor oil, emetics, tartar-emetic, ipecacuanha, squills, expectorants, opium, calomel, blisters, leeches, emollient poultices, warm bath, columbo, gentian.

Chronic Bronchitis, Bronchial Consumption. — Treatment: — Bleeding, leeches, warm climate, tartar-emetic ointment, emollient poultices, emetics, digitalis, antimony, squills, balsam copaiva, quinine, opium, conium, ipecac, prussic acid, sugar of lead, blue-pill, or calomel, salivation.

Pthisis Pulmonalis. — Treatment: — Blood-letting, digitalis, tartar-emetic blisters, issues and setons, gum arabic, prussic acid, acetate of lead, opium, uva ursi, expectorants, muriate of ammonia, tartar-emetic ointment, salivation, squills.

Nephritis.—Treatment:—Blood-letting, cupping or leeches, active cathartics, calomel, castor oil, enemata, emollient poultices, blisters, diaphoretics, antimony, steam bath, Dover's powder, uva ursi, opium, conium, lime water, balsam copaiva.

Cystitis.—Treatment:—Bleeding, leeches, emollient poultices, gentle laxatives, enemata, opium, introduction of catheter, steam bath, antimony, calomel.

Chronic cystitis.—Treatment:—Cupping, leeches, blood-letting, castor oil, magnesia, caustic issues on the thigh, muriated tincture of iron, beech leaves, uva ursi, ursi, elm bark injected into the bladder.

Hysteritis.—Treatment:—Bleeding, leeches, emollient poultices, calomel, epsom salts, injecting warm emollient fluids into the vagina, blisters, nitre, antimony, opium.

Chronic hysteritis.—Treatment:—Blood-letting, cupping, purgatives, leeches, blisters, emollient injections, warm bath, mercury, camphor, antimony, balsam copaiva, muriate of ammonia, liquorice.

Pericarditis.—Treatment:—Calomel, bleeding, opium, salivation, leeches, blisters, cream of tartar, diuretics, squills, pustulation with tartar-emetic ointment, or a caustic issue over the region of the heart.

Acute Rheumatism.—Treatment:—Blood-letting, purgatives, calomel, epsom salts, emetics, antimony, opium, diaphoretics, salivation, quinine, colchicum, magnesia, stramonium, leeches, blisters.

Chronic Rheumatism.—Mercury, rhubarb, quinine, antimony, salivation, sarsaparilla, vapor bath, sulphate of zinc, stramonium, colchicum, arsenic, leeches, cups, blisters, spirits turpentine, capsicum, camphor, warm bath.

Gout.—Treatment:—Bleeding, cathartics, calomel, emetics, ipecac, opium, eupatorium perfoliatum, colchicum, magnesia, blue pill, camphor, ginger, savin, laudanum, sinapisms, enemata, cupping, leeching.

Catarrhal Ophthalmia.—Treatment:—Scarifying, antimony, calomel and jalap, emollient applications, opium, solution of zinc, nitrate of silver, corrosive sublimate, ipecac, blisters, lunar caustic, quinine, bark, arsenic.

Rheumatic Ophthalmia.—Treatment:—Bleeding, antimony, opium, calomel, Dover's powder, blisters, cupping, puncturing the cornea, aqueous solutions of opium.

Purulent Ophthalmia.—Treatment:—Blood-letting, leeches, decoction of poppy-heads, calomel, ipecac, antimony, castor oil, blisters, emollient fomentations, lime, nitrate of silver, quinine, nitric acid.

Scrofulous Ophthalmia.—Treatment:—Leeches, purgatives, calomel, castor oil, rhubarb, emetics, antimony, Dover's powders, sarsaparilla, quinine, barytes, iodine, nitrate of silver.

Syphilitic and strumous iritis.—Treatment:—Mercury, antimony, jalap, salivation, belladonna, precipitate ointment, chalk, quinine, setons in the nape of the neck.

Variola, Small-pox.—Treatment:—Blood-letting, purgatives, calomel, emetics, diaphoretics, nitre, antimony, ammonia, cooling regimen, wine, camphor, quinine, opium, blisters, scarifications, chalk, ipecac, warm bath.

Rubeola, Morbilli, Measles.—Treatment:—Mild laxatives, diaphoretics, sage, elder blossoms, balm, eupatorium, bleeding, antimony, nitre, warm baths, stimulating friction, sinapisms, camphor, ammonia, opium, blisters, calomel, squills, serpentaria.

Scarlatina.—Treatment:—Gentle aperients, cool or tepid drinks, emetics, brisk mercurial purges, warm baths, nitre, antimony, ammonia, sulphuric acid, cold water to the surface, blisters, blood-letting, camphor, calomel, opium, sinapisms, wine, quinine, capsicum, enemata, serpentaria.

Erysipelas.—Treatment:—Blood-letting, purgatives, calomel, emetics, diaphoretics, antimony, ipecacuanha, magnesia, castor oil, warm bathing, bark, wine, opium,

camphor, cupping, blisters, enemata, corrosive sublimate, nitrate of silver, incisions in the inflamed skin.

Herpes Phlyctenodes.—Treatment :—Gentle aperients, simple diet, diaphoretics, calomel, ipecac, warm bath, bleeding, Dover's powder, lunar caustic.

Herpes Labialis.—Treatment :—Fomentations of white poppy-heads, acetate of lead.

Herpes Preputialis.—Treatment :—A solution of borax, nitrate of silver, chloride of sodium in solution.

Pemphigus.—Treatment :—Mild laxatives, rest, tepid bathing, bleeding, diuretics, calomel, Fowler's arsenical solution, opium, quinine, sulphuric acid.

Urticaria, Nettle Rash.—Treatment :—Emetics, ipecac, mild laxatives, simple diet, cooling drinks, rest, magnesia, quinine, sulphuric acid, iron, Fowler's solution, tepid bath.

Miliaria, Miliary Fever.—Treatment :—Ipecac, emetics, warm bathing, diaphoretics, Dover's powder, ammonia, serpentaria, camphor, opiates.

Lichen.—Treatment :—Tepid bathing, mild aperients, diluent acidulated drinks, cream, calomel, unsalted butter, sulphuric acid, bleeding, Fowler's solution, laxatives, low diet.

Eczema.—Treatment :—Sulphur ointment, tepid bathing, mild laxatives, nitre, tartar emetic, Dover's powders, calomel, nitric acid, soda, sarsaparilla, camphor, opium, stramonium, borax, cantharides, arsenic, Fowler's solution.

Herpes Zoster.—Treatment :—Gentle aperients, simple diet, diaphoretics, calomel, ipecac, warm bath, bleeding, Dover's powders, lunar caustic.

Herpes Circinatus, Ring Worm.—Treatment :—Alkaline washes, sulphate of copper or zinc, ointment of narrow-leaved dock, mild laxatives.

Erythema.—Treatment :—Light diet, gentle diapho-

retics, mineral acids, warm baths, tepid ablutions, borax, acetate of lead, opium.

Roseola.—Treatment:—Rest, mild aperients, acidulated cooling diluents, simple diet, refrigerant diaphoretics.

Hemorrhagica Petechialis.—Treatment:—Tonics, cinchona, serpentaria, sulphuric acid, wine, nitrate of silver, spirits of turpentine, blood-letting, purgatives, calomel and jalap, oil of turpentine, bathing the surface with a decoction of oak bark.

Hemorrhages.—Treatment:—Blood-letting, digitalis, cold, blisters, sinapisms, warmth, sugar of lead, alum, muriated tincture of iron.

Epistaxis.—Treatment:—Bleeding, cool drinks, laxatives, nitre, cold water applied to the head, neck and genital organs, sugar of lead, gallic acid, blisters to the nape of the neck, pediluvium, sinapisms to the feet.

Hæmatemesis, bleeding at the stomach.—Treatment:—Blood-letting, sinapisms to the epigastric and hypocondriac regions, cupping, warm bath, laxatives, enemas, active purgatives, emetics of ipecac, sugar of lead, spirits of turpentine, castor oil, tincture of iron, juice of the common nettle.

Hæmaturia, bleeding of the urinary organs.—Treatment:—Bleeding, warm bath, opium, cupping, sugar of lead, sinapisms over the kidneys, muriated tincture of iron, mucilaginous drinks, alum, ipecac, decoction of logwood, cold water to the genitals, inject cold solutions of the sugar of lead.

Hæmoptysis, bleeding at the lungs.—Treatment:—Blood-letting, common salt, sugar of lead, sinapisms to the breast, cooling drinks, laxative enemata, nitrate of potash, opium, calomel, emetics, capsicum, digitalis, caustic issues, setons, leeches to the anus, camphor, ipecac, cantharides, warm hip bath.

Menorrhagia, uterine hemorrhage.—Treatment:—

Bleeding, sugar of lead, ipecac, opium, camphor, cinnamon, alum, nitre, astringent injections into the vagina, elixir of vitriol, tampons, emetics, valerian prussiate of iron, ergot, savin.

Phlegmasia Dolens. — Treatment : — Blood - letting, leeches, purgatives, magnesia, colchicum, antimony, calomel, opium, ipecac, nitre, frictions with dry flannel, fomentations with hot vinegar and water.

Apoplexy. — Treatment : — Copious blood-letting, cold water to the head, fomentations, sinapisms of the tincture of capsicum to the feet, cupping, active purgatives, calomel and colocynth, croton oil, castor oil and turpentine, enemata, aloes, antimony, emetics, zinc, blisters, issues.

Hemiplegia, palsy of one side ; Paraplegia, palsy of the legs. — Treatment : — Blood-letting, purgatives, salts, aloes, calomel, scammony, colocynth, capsicum, emetics, blisters to the neck, sinapisms to the ankles, stimulating enemata, friction, stimulating baths, electricity, galvanism, strychnine, salivation, iodine, warm bath.

Epilepsy. — Treatment : — Bleeding, cold water in large draughts, emetics in large draughts, emetics of ipecac, calomel, diaphoretics, warm bath, antimony, camphor issues, setous, emetics, spirits of turpentine, castor oil, oil of turpentine, mistletoe, oxide of zinc, nitrate of silver, tin, lead.

Catalepsy. — Treatment : — Sulphuric ether, stimulating applications to the feet, enemata, bleeding, purgatives, galvanism, electricity, country air, regular exercise, tepid bathing, blue pill, camphor, tepid shower bath, zinc, valerian, musk, castor, opium.

Chorea, St. Vitus's Dance. — Treatment : — Purgatives, mercury, quinine, aloes, bleeding, vegetable diet, Dover's powder, magnesia, valerian assafœtida, hyoscyamus, camphor, opium, turpentine, warm pediluvium, blisters, savin,

iron, leeches and warm bath, sulphur, issues, tartar-emetic ointment, &c.

Convulsive affections of infants.—Treatment:—Emetics of ipecac, purgatives, enemata, infusions of savin and spigelia, bleeding, calomel, pediluvium, cold water to the head, blisters, assafoetida, musk, opium, Dover's powder, warm bath, setons, issues, sulphur.

Hysteria.—Treatment:—Bleeding, sinapisms, emetics, sulphate of zinc, ipecac, opium, assafoetida, musk, sulphuric ether, castor, enemata, warm pediluvium, turpentine, enemata, camphor, valerian, ictodes-foetida, antimony, iron, mercury, cold shower bath, &c.

Puerperal Convulsions.—Treatment:—Blood-letting, sinapisms to the feet, purgative enemata, cupping, cold applications to the head, active cathartics, calomel, jalap, aloes.

Tetanus.—Treatment:—Bleeding, leeches, mercury, opium, warm bath, purgatives, castor oil, spirits of turpentine, wine, prussic acid, cold effusions.

Hydrophobia.—Treatment:—Local applications to the wound, wash the wound with warm water, excision, cautery, cupping, glysters, ligatures, belladonna, water plantain, vinegar, cantharides, mercury, cold bathing, copious bleeding.

Monomania.—Treatment:—Blood-letting, leeches, purgatives, mercury, castor oil, jalap, spigelia, turpentine, emetics, regimen, exercise, warm bath, cold bath, blisters, circular swing, music.

Delirium Tremens.—Treatment:—Opium the sheet anchor, castor oil, laxatives, enemata, cupping, emetics of tartar-emetic, ipecacuanha, cold and tepid effusions, ammonia, assafoetida, camphor, Hoffman's anodyne.

Neuralgia.—Treatment:—Divide the nerve with a scalpel, quinine, arsenic, carbonate of iron, stramonium, frictions with the extract of belladonna, oil of turpentine,

moxa, leeches, strong magnet, lobelia, zinc, leeches to the anus, aloes.

Amaurosis.—Treatment:—Bleeding, free purging with calomel, epsom salts, antimony, salivation, belladonna, blisters or setons on the neck, leeches to the temples, blue-pill, ipecac, sarsaparilla, arsenic, bark, cold bath, capsicum, opium, emetics, leeches around the anus.

Asthma.—Treatment:—Blood-letting, hyosciamus, stramonium, emetics of ipecac, squills, vinegar, digitalis, opium, skunk cabbage, lobelia inflata, galvanism, tonics, bark, quinine, arsenic, carbonate of iron, blue-pill, tepid shower bath, warm bath.

Asphyxia from drowning.—Treatment:—Artificial inflation of the lungs, gradual warmth, friction with a dry flannel, mustard and capsicum, stimulating injections, warm wine, weak brandy toddy, infusions of balm, sage or catnip.

Asphyxia, from mephitic gases.—Treatment:—Dashing cold water on the face and breast, dry frictions to the extremities, cold wine, cold shower bath at short intervals, flesh brush, ammonia, stimulating injections, artificial respiration, abstraction of blood, warm wine, galvanism.

Asphyxia from Electricity.—Treatment:—Cold water copiously dashed over the whole body, frictions with the flesh-brush.

Asphyxia from cold.—Treatment:—Gradual communication of warmth to the body, immersion in spring water continued forty minutes, gentle frictions with flannel, artificial respiration, gentle stimulants, such as balm, sage, warm wine, &c.

Pneumox-thorax.—Treatment:—Blistering, tartar-emetic ointment, cupping, moxa, issues, setons, &c.

Dilatation of the ventricles.—Treatment:—Bleeding, low diet, starvation and venesection, diuretics, squills, nitre, digitalis, purgatives, antimony, valerian, orange

flowers, cat uint, mercury, castor oil, blue-pill, tepid shower bath.

Sympathetic affection of the heart.—Treatment:—Gentle aperients, tepid bath, gentle tonics, bitters, iron, bleeding, warm pediluvium, digitalis.

Angina-Pectoris.—Treatment:—Bleeding, ether, camphor, opium, hyoscyamus, ammonia, draughts of cold water, emetics, leeches, sinapisms to the legs, mild diet, blue-pill, tepid or cold bathing.

Indigestion.—Treatment:—Diet, gentle aperients, mild tonics, regular exercise, rhubarb, aloes, soda, ipecac, hyoscyamus, boneset, mild tonics, alkalies, calomel, gentian, iron, white mustard seed, mercury, antimony, nitromuriatic acid bath, opium, ammonia, nitrate of potash, leeches, blisters.

Diarrhœa.—Treatment:—Mild purgatives, calomel, castor oil, ipecac, laudanum, chalk, warm bath, leeching, Dover's powder, acetate of lead, balsam copaiva, sulphate of copper, injections of mallows, flaxseed or barley water, sulphuric acid.

Cholera.—Treatment:—Opium, sinapisms to the region of the stomach and liver, free use of bland drinks, frictions with spirits of turpentine, calomel, warm bath, tinct. of capsicum to the extremities, camphor in vitriolic ether, mucilages in a warm state, ipecac, columbo, calomel, ammonia.

Cholera Infantum.—Treatment:—Leeches to the temple, calomel, poultices over the abdomen, blisters behind the ears, ipecac, mild laxatives, castor oil, warm bath, spirits, Dover's powder, magnesia, tartrate of iron, charcoal, wine whey, milk punch, ammonia, common soot.

Flatulent colic.—Treatment:—Rapid friction with the flesh-brush, camphor, laudanum, vitriolic ether, oil of juniper, emetics of ipecac, essence of peppermint, ca-

thartics, enemata, castor oil, turpentine, laudanum, bleeding, leeches, blisters.

Bilious Colic.—Treatment:—Emetics, eupatorium, or camomile tea, antimony, calomel, sinapisms, or epispastics to the epigastrium, castor oil, enemata of castor oil and turpentine, opium, salivation, blood-letting, calomel, magnesia, warm bath.

Colica Pictonum.—Treatment:—Blood-letting, opium, calomel, salivation, purgatives, castor oil with spirits of turpentine, purgatives, enemata, glauber salts, flaxseed tea, blisters, leeches, tartar-emetic ointment, warm bath, senna, alum.

Ileus.—Treatment:—Bleeding, cupping, leeches, opium, purgatives, calomel, castor oil, enemata of warm water, tobacco, cold water, &c., cold effusions, mercury, tincture of rhubarb, and aloes.

Constipation.—Treatment:—Proper diet, active exercise, regular attempts at stool, calomel, rhubarb, jalap, aloes, enemata, blue-pill, aloes and antimony, castor oil, oil of turpentine, salivation.

Intestinal Worms.—Treatment:—Spare and liquid diet, mild purgatives, epsom salts, spigelia, followed by calomel and jalap, tin filings, spirits of turpentine, male fern, pomegranate root.

Hemorrhoids, Piles.—Treatment:—Light vegetable diet, bleeding, sulphur, cream of tartar, blue mass, nitre, cupping, sinapisms, blisters, injections of cold water, acetate of lead, quinine, opium, cinnamon, aloes, ipecac, astringents, injections, excision of tumors, balsam copaiva, oil of turpentine, aloetic purgatives.

Jaundice.—Treatment:—Opium, warm bath, leeching, frictions, emollient applications to the epigastrium, bleeding, purgatives, enemata, emetics, ipecac, mercury, mercurial frictions, nitro-muriatic acid bath, proper diet.

Diabetes Mellitus.—Treatment:—Bleeding, leeching,

cupping, opium, lime water, alum, uva ursi, active exercise, friction with flannel, carbonate of ammonia, blisters, quinine, exclusive animal diet.

Diabetes Insipidus. — Treatment: — Tonics, alkalies, opium, quinine, bitartrate of soda, mercury, ipecac, magnesia and rhubarb, lime water, uva ursi, hyoscyamus, camphor, gum arabic, mineral acids, quinine, iron, burgundy pitch, galbanum and turpentine to the loins, castor oil.

Lithic acid diathesis. — Treatment: — Proper diet, mild aperients, alkalies, bitters, vegetable tonics, calomel, antimony, magnesia, soda, saleratus, gentian, columbo, warm bath, opium, hyoscyamus, vegetable diuretics, bleeding, cupping, colchicum.

Phosphatic diathesis. — Treatment: — Opium, tonics, mineral acids, cinchona, uva ursi, pitch, soap or galbanum plaster to the kidneys, issues in the back, hyoscyamus, country air, exercise.

Ischuria renalis. — Treatment: — Bleeding, cupping, leeching, warm bath, blisters, stimulating diuretics, spirits turpentine, castor oil, balsam copaiva, juniper oil, nitre and laudanum, mercury.

Retention of urine. — Treatment: — Introduction of catheter, canth, camphor, blisters to the pubic region, spirits of turpentine, juniper, oil, dipple oil, Peruvian balsam, cold water to the pubic region, blood-letting, leeching, emollient clysters, fomentations, mild purgatives, antimony, warm bath, calomel, opium.

Dysuria, pain in voiding urine. — Treatment: — Mild laxatives, flaxseed tea, gum arabic, Dover's powder, castor oil, rhubarb, calomel, ipecac, lunar caustic, borax, citron ointment, zinc or alum injected into the vagina, diluents, opiates, fomentations, anodyne enemata, flaxseed tea.

Enuresis, incontinence of urine. — Treatment: — Alum, cantharides, uva ursi, iron, cold shower bath, electricity, stimulating frictions, cupping the perineum, blisters, ano-

dyne enemata, Dover's powder, stramonium, tonics, iron, quinine, oxyde of zinc, spirits of turpentine.

Ascites. — Treatment : — Blood-letting, cups, leeches, blisters, setons, drastic purgatives, cream of tartar, eleterium gamboge, diuretics, squills, digitalis, acetate of potash, nitrate of potash, cantharides, juniper berries, colchicum, spirits of turpentine, erigeron, heteraphullum and parsley, calomel.

Scrofula. — Treatment : — Diet and regimen, pure air, calomel, blue mass aperients, rhubarb, tonic vegetable bitters, gentian, quinine, leeches, saturnine solutions, nitrate of silver, sulphate of copper, corrosive sublimate, sarsaparilla, conium, antimony, setons.

Bronchocele, Goitre. — Treatment : — Iodine, burnt sponge, calcined egg shells, sea water, squills, kermes minerals, belladonna, conium, digitalis, mercury, antimony, blistering, cataplasms, mercurial ointment.

Scorbutus, Scurvy. — Treatment : — Fresh vegetables and animal food, lemon juice and vinegar, nitre, iron tonics, cinchona, muriate of lime, lunar caustic.

Chlorosis. — Treatment : — Exercise, purgatives, aloes, rhubarb, calomel, ipecac, hyoscyamus, Dover's powders, diet, sea-bathing, tepid shower bath, tonics, iron.

Gonorrhœa, Clap. — Treatment : — Blood-letting, saline purgatives, nitre, antimony, gum arabic, warm fomentations, opium, camphor, balsam copaiva, cubeb, spirits of turpentine, injections of sulphate of zinc, and sulphate of copper, nitrate of silver, lunar caustic, cantharides, sarsaparilla, mercury.

Syphilis. — Treatment : — Mercury, emollient poultices, lead, sulphate of copper, citron ointment, corrosive sublimate, lunar caustic, bleeding, antimony, zinc, nitre, quinine, opium, hyoscyamus, cicuta, nitrate of silver, Venice turpentine, balsam of copaiva, myrrh, red precipitate ointment, salivation, warm bath, guaiacum.

Buboes. — Treatment: — Mercury, frictions, emollient poultices, hydriodate ointment, bleeding, purgatives, antimony, lead water, blisters, opium, sarsaparilla, lead, copper, corrosive sublimate, galbanum, cicuta, carrot poultices, nitric acid, hyoscyamus.

Amenorrhœa. — Treatment: — Blood-letting, opium, ether, active cathartics, purgatives, enemata, sinapisms, warm pediluvium, camphor, ergot, blisters, warm bath, antimonials, iron, ipecac, castor oil, balsam copaiva, spirits of turpentine, cantharides.

Dysmenorrhœa. — Treatment: — Camphor, Dover's powder, elder blossoms, or eupatorium tea, opium, ipecac, warm bathing, bleeding, aperients, blue-pill, ipecac emetics, antimony, guiacum, sulphur, stramonium.

Leucorrhœa, fluor albus. — Treatment: — Bleeding, purgatives, antimony, blue-pill, injections of warm water and sugar of lead into the vagina, cantharides, balsam copaiva, turpentine, alum, ipecac, astringent injections, such as zinc, copper, alum, oak bark, sulphuric acid, and nitrate of silver.

Cholera Asphyxia. — Treatment: — Calomel, opium, camphor, sulphuric ether, mild purgatives, rhubarb, or castor oil, sinapisms, alcoholic vapor bath, blood-letting, cupping, leeches, frictions with tincture of capsicum, brandy, ammonia, turpentine, sugar of lead, mustard, emetics.

HOMŒOPATHIC PRACTICE.

The following are *Hahnemann's* remarks on the triturating process of *Homœopathic* remedies, as transcribed from *Jahr's* and *Gruner's Pharmacopœia*.

"All those homœopathic drugs which constitute the pure materia medica, are prepared in the manner pointed out below. The following anti-psorics come under this remark: silica, calcarea carbonica, natrum carbonicum, ammonium carbonicum, magnesias carbonicum, baryta carbo-

nica, carbo-vegetabilis, carbo-animalis, graphites, sulphur, antimonium crudum, antimonium, gold, platinum, zinc, copper, silver, tin. Lumps of these metals, not the foil, are rubbed upon a hard, fine hone, under water, or sometimes under alcohol; for example, iron. Of these pulverized substances you take one grain, mercury may be used in the liquid state; of petroleum you take one drop instead of one grain. Put this grain into an unglazed porcelain mortar, then you take thirty-three grains of sugar of milk, and mix them with the drug, by triturating the mass with some force for about six minutes, by means of a porcelain pestle; before you triturate, stir the mass for a little while with a spatula. Having triturated the mass, you stir it again for about four minutes, scraping up that part which covers the bottom of the porcelain mortar, and also that which adheres to the pestle; then you triturate again with great force for about six minutes, without, however, adding anything new. This mass you scrape up again for about four minutes; then add another thirty-three grains of sugar of milk, stir the new compound for a minute with a spatula, then triturate it for six minutes with the pestle, scrape it up for four minutes, triturate again with great force for six minutes, scrape up the mass again four minutes, then add the last thirty-three grains of sugar of milk, and with this last added portion proceed as with the two former. This powder you enclose in a well-corked glass vial, and mark it with the name of the substance, and the figure $\frac{1}{100}$, to show that this is the first potency of the substance. In order to prepare the degree $\frac{1}{1000}$, you take one grain of the degree $\frac{1}{100}$, and add to it thirty-three grains of the sugar of milk. Stir up this mass for a moment with the spatula. Then triturate for six minutes, stir it up for four minutes, triturate again for six minutes, and then stir up again for four. After this, you

add the second thirty-three grains of sugar of milk, proceed then as before; afterwards add the last thirty-three grains of sugar of milk, stir up and triturate again as before, and enclose the mass in a well-corked vial, marked $\frac{1}{100000}$, or second potency.

“To prepare the degree $\frac{1}{1000000}$, or third potency, you take one grain of the degree $\frac{1}{100000}$, and go through the processes of stirring and triturating in the same way as before, employing upwards of an hour for the preparation of each different potency. For the sake of establishing a sort of uniformity in preparing homœopathic remedies, and especially the anti-psorics, I never carry the trituration above the millionth degree. From this degree, I derive the dilutions in their various degrees of potency. For the process of trituration, a certain force should be employed; not too much, however, lest the mass adhere too tenaciously to the mortar, to be scraped up in four minutes.

“From the millionth degree of trituration, the dilutions in the various degrees may be obtained by dissolving these triturated substances in alcohol or water. Chemistry is not acquainted with the fact that, all substances, after having been triturated up to the millionth degree, can be dissolved in either alcohol or water. Sugar of milk cannot be dissolved in pure alcohol; this is the reason why the first dilution should be composed of one-half water, and one-half alcohol. To one grain of the millionth, you add fifty drops of distilled water, and turn the vial several times around its axis; by this means the sugar of milk becomes dissolved: then, you add fifty drops of good alcohol, and shake the vial twice, first carrying the arm up and then down. Only two-thirds of the vial should be filled with the solution.

“This vial is then marked with the name of the medicine,

and the number $\frac{1}{100}$. Of this solution you take one drop, and mix it with ninety-nine or one-hundred drops of pure alcohol, shaking the vial twice after it has been corked; this vial is marked $\frac{1}{10000}$. Of this solution you take one drop, and mix with it ninety-nine or one-hundred drops of pure alcohol, then shake the vial twice, and mark it $\frac{1}{1000000}$. Of this potency you again take a drop, and mix it with ninety-nine or one-hundred drops of alcohol, shaking this third vial twice, and mark it $\frac{1}{11}$. In the same way you continue the preparation, and marking of the higher potencies, $\frac{1}{100}$ $\frac{1}{11}$, $\frac{1}{10000}$ $\frac{1}{11}$, $\frac{1}{111}$, IV, V, &c.

“The intermediate vials are put in perpendicular boxes and kept in the dark, in order not to be affected by the light of day. In practice only the full vials are used. The shaking being accomplished by means of moderate strokes with the arm, it is desirable that the vials be of such size that the one-hundred drops will only two-thirds fill them. Vials that have contained one medicine, ought never to be used for another even if they have been previously rinsed with great care.”

“Vegetable substances which can only be had dry, are triturated in the same manner. The millionth trituration may then be dissolved, like all the other substances, either in water or alcohol. In this state, they may be preserved much better and longer than the common tinctures which easily spoil.

“Of the juiceless *vegetable* substances, olcander, thuja, mezereum, you may take one grain and a half, the fresh leaves, bark, roots, &c, and convert them into the millionth trituration, with three times one-hundred grains of sugar of milk. Of this trituration you take one grain, and carry it through the vials, obtaining in this way any degree of potency that may be desired; shake each vial twice, first carrying the arm up and then down. The

same process of trituration may be resorted to in regard to the recently obtained medicinal juices. Squeeze the juice out of the substance, triturate one drop with the necessary quantity of sugar of milk to obtain the millionth trituration. Of these you take one grain, dissolve it in an equal proportion of water and alcohol, and then carry a drop of this mixture through a series of twenty-seven vials, obtaining in this way the degree of potency that is desired.

“By triturating the juice first, the medicinal virtues of the drug are better developed, than by simply mixing the juice with the alcohol by means of two shakes. I know this from experience.

“In the beginning of my practice, I gave a small portion of a grain of the millionth trituration at a dose. But the uncertainty of this mode of exhibiting the remedy, led me to the discovery of preparing the dilutions, and to the use of the globules, any definite number of which may be moistened with the dissolved drug. Homœopathy being based upon a law of nature, it should avoid and exclude all uncertainties.

“Frequent observations have convinced me that it is better to shake the vial twice only, in order to develop the medicinal virtue of the drug just enough to affect the disease in a proper manner. By shaking the vial ten times, as I was in the habit of doing, the proportion between the progressively developed intensity of action of the medicinal properties of the drug, and the degree of potency, were destroyed. The object of the dynamizing process, is to develop the intensity of action of the medicinal properties of the drug, at the same time as that action is reduced to a milder tone. Two shakes are sufficient to establish the due proportion between these two effects.

Table showing the quantity of alcohol or fluid, required to dissolve one single grain or drop of a homœopathic drug (as sulphur, aconite, etc.), down into the following homœopathic attenuations or dilutions.— [DR. SIMPSON ON HOMŒOPATHY, p. 285.]

- 1st attenuation.—One grain or drop in one and half teaspoonful of alcohol.
- 2d attenuation.—One grain in twenty-one fluid ounces of alcohol.
- 3d attenuation.—One grain in two thousand and eighty ounces, or in one hundred and four pints of alcohol.
- 6th attenuation.—One grain in thirteen million gallons, or in two hundred and six thousand hogsheads, or in fifty-one thousand tuns of alcohol.
- 9th attenuation.—One grain in a lake of alcohol with a volume of about fourteen cubic miles, or in a lake of fifty fathoms in depth, and presenting two hundred and fifty square miles of surface.
- 12th attenuation.—One grain in a sea containing about fourteen million cubic miles of alcohol, or in a quantity of fluid equal to a sea six times the size of the Mediterranean Sea.
- 15th attenuation.—One grain in an ocean of fourteen billion cubic miles of alcohol, or in an ocean about forty-six thousand times greater than the whole waters of all the oceans of the earth.
- 24th attenuation.—One grain in an ocean of fourteen quintillion cubic miles of alcohol, or in a quantity sufficient to make one hundred and forty masses, each filling a sphere extending from limit to limit of the orbit of the planet Neptune.

30th attenuation.—One grain in an ocean of fourteen septillion cubic miles of alcohol, or in a quantity sufficient to make one hundred and forty billion spherical masses, extending from limit to limit of Neptune's orbit, or in a quantity equal to many hundred spheres, each with a semidiameter or radius extending from the earth to the nearest fixed star.

List of diseases and Homœopathic remedies by Dr. J. Laurie.

The remedies of the vegetable kingdom are the third attenuation, those of the mineral kingdom of the fourth.

Typhus fever.—Remedies :—Bryonia, arsenic, rhus toxico, croton oil, nux vomica, aconite, belladonna, camphor, hen-bane, cocculus Indicus, arnica. The sugar globules are moistened with these tinctures, and five or six given every two or three hours.

Intermittent fevers.—Remedies :—Quinine, arsenic, ipecac, nux vomica, antimony, belladonna, opium, cocculus Indicus, Ignatia or St. Ignatius' bean, white hellebore, aconite, Cayenne pepper.

Bilious fever.—Remedies :—Aconite, belladonna, bryonia, chamomilla, nux vomica, mercurius, pulsatilla, quinine, digitalis, ipecac, tartar-emetic, arsenic.

Yellow fever.—Remedies :—Belladonna, bryonia, rhus toxicodendron, arsenic, nux vomica, veratrum album, lachesis, or viper poison, Spanish flies, mercurius.

Scarlet fever.—Remedies :—Belladonna, mercurius, arsenic, nux vomica, pulsatilla, aconite, opium, tartar-emetic.

Scarlet Rash.—Remedies :—Belladonna, aconite, coffea, sulphur, ipecac, pulsatilla, bryonia, dulcamara, belladonna, arsenic, phosphorus, rhus tox, swamp sumach, cinchona, conium, mercurius, capsicum.

Rubeola, measles.—Remedies :—Aconite, coffea, pulsatilla, sulphur, nux vomica, bryonia, ipecac.

Variola, small-pox.—Remedies :—Coffea, chamomilla, aconite, ipecac, tartar-emetic, bryonia, rhus, belladonna, pulsatilla, stramonium, muriatic acid, mercurius, sulphur, lachesis, vegetable charcoal, arsenic, cinchona, phosphorus, sulphuret of lime, acetate of copper.

Varicella, chicken-pox.—Remedies :—Aconite, coffea, belladonna, emetic tartar, mercurius.

Miliary fever.—Remedies :—Aconite, coffea, belladonna, veratrum, arsenic, ipecac, bryonia, nux vomica, carbonate of lime, chamomilla, tincture of sulphur, acetate of copper.

Urticaria, nettle-rash.—Remedies :—Dulcamara, aconite, nux vomica, pulsatilla, crude antimony, belladonna, sulphuret of lime, rhus, bryonia, nettles, sulphur, nitric acid, lime.

Quinsy.—Remedies :—Mercurius, lachesis, pulsatilla, cantharides, nux vomica, chamomilla, coffea, ignatia, sulphur, veratrum, capsicum.

Mumps.—Remedies :—Mercurius, belladonna, cocculus, carbo-vegetabilis.

Indigestion.—Remedies :—Pulsatilla, arsenic, chamomilla, rhus toxicodendron, sulphur, ipecac, cinchona, nux vomica.

Flatulent Colic.—Remedies :—Cinchona, arsenic, nux vomica, pulsatilla, carbo-vegetabilis, colchicum, belladonna.

Hæmatemesis, vomiting blood.—Remedies :—Nux vomica, pulsatilla, cinchona, arnica, sulphur.

Constipation.—Remedies :—Opium, bryonia, lachesis, alum, nux vomica, lead, platina, nitro-muriatic acid, silicea, lycopodium, china.

Hæmorrhoids.—Remedies :—Aconite, nux vomica, sulphur, arsenic, belladonna, rhus, pulsatilla, platina, ignatia, colocynth.

Prolapsus ani.—Remedies :—Ignatia, nux vomica, mercurius, sulphur, calcarea.

Diarrhœa.—Remedies :—Dulcamara, bryonia, cinchona, chamomilla, mercurius, rhubarb, pulsatilla, ipecac, nux vomica, colocynth, arsenic, crude antimony, rhus, lachesis, nitric acid, phosphoric acid, magnesia.

Dysentery.—Remedies :—Aconite, chamomilla, ipecac, mercurius, corrosive sublimate, bryonia, arsenic, carbo-vegetabilis, cinchona, cantharides, sulphur.

Cholera.—Remedies :—Ipecac, veratrum album, arsenic, cinchona, pulsatilla, copper, sulphur, carbo vegetabilis, nux vomica, ergot, stramonium.

Cholérine.—Remedies :—Veratrum, mercurius, pulsatilla, nux vomica, chamomilla, colocynth, ferrum, Dulcamara, carbo vegetabilis, cantharides.

Inflammation of the liver.—Remedies :—Belladonna, aconite, nux vomica, chamomilla, mercurius, arsenic, pulsatilla, nux vomica.

Jaundice.—Remedies :—Mercurius, cinchona, pulsatilla, digitalis, chamomilla.

Inflammation of the spleen.—Remedies :—Aconite, arsenic, cinchona, nux vomica, bryonia.

Inflammation of the stomach.—Remedies :—Aconite, belladonna, ipecac, crude antimony, nux vomica, lachesis, pulsatilla, arsenic, cantharides, hyoscyamus, arnica.

Inflammation of the bowels.—Remedies :—Arsenic, mercurius, nux vomica, lachesis, nitric acid, bryonia, pulsatilla, colocynth, chamomilla, cinchona, colchicum, phosphorus, sulphur, silicea.

Inflammation of the peritoneum.—Remedies :—Aconite, belladonna, arsenic, chamomilla, lycopodium, colocynth.

Worms.—Remedies :—Aconite, ferrum, nux vomica, mercurius, sulphur, calcarea, silicea, pulsatilla, ipecac, antimony, cicuta, cinchona.

Laryngitis.—Remedies :—Sulphur, burnt sponge, Aconite, lachesis, belladonna, hyoscyamus.

Whooping Cough. — Remedies : — Dulcamara, pulsatilla, mercurius, belladonna, aconite, ipecac, nux vomica, chamomilla and sulphur.

Croup. — Remedies : — Aconite, sulphur, burnt sponge, arsenic, tartar emetic, lachesis, caustic, ammonia, bromin.

Influenza. — Remedies : — Camphor, aconite, mercurius, arsenic, bryonia, phosphorus, belladonna, pulsatilla, arnica.

Bronchitis. — Remedies : — Aconite, pulsatilla, bryonia, sponge, belladonna, nux vomica, lachesis, mercury, lycopodium, stannum, dulcamara, arsenic, ipecac, tartar-emetic.

Pneumonia. — Remedies : — Aconite, bryonia, phosphorus, tartar - emetic, mercurius, belladonna, lachesis, arsenic, antimony, sulphur.

Pleuritis. — Remedies : — Aconite, bryonia, sulphur, mercurius, arsenic, arnica.

Hæmoptysis. — Remedies : — Pulsatilla, bryonia, nux vomica, rhus, arnica, aconite, ipecac, iron, opium, cinchona.

Consumption. — Remedies : — Ipecac, arsenic, nux vomica, bryonia, pulsatilla, tartar-emetic, opium, china, sambucus, musk, belladonna, lachesis, veratrum, dulcamara, cinchona, stannum.

Determination of the blood to the head. — Remedies : — Aconite, nux vomica, calcarea, belladonna, opium, coffea, chamomilla, ignatia, arnica, mercurius, pulsatilla, lycopodium, dulcamara, sanguinaria, cinchona, sulphur, carbonate of lime, opium, conium.

Inflammation of the brain and its membranes. — Remedies : — Aconite, belladonna, bryonia, hyoscyamus, opium, stramonium, zinc, acetate of copper, rhus, lachesis, mercurius.

Apoplexy. — Remedies : — Aconite, belladonna, nux vomica, opium, lachesis, arnica, pulsatilla, ipecac, carbonate of barytes.

Paralysis, Palsy. — Remedies : — Arnica, bryonia, rhus, sulphur, electricity, galvanism.

Tetanus. — Remedies : — Belladonna, cicuta, opium, arnica, ignatia, stramonium, hyoscyamus.

Delirium Tremens. — Remedies : — Nux vomica, opium, aconite, belladonna, lachesis, sulphur, calcarea.

Epilepsy. — Remedies : — Belladonna, copper, hyoscyamus, ignatia, lachesis, nux vomica.

Neuralgia. — Remedies : — Belladonna, platina, lycopodium, arsenic, colocynth, veratrum, china, assafoetida, spigelia.

Headache. — Remedies : — Belladonna, bryonia, rhus, sepia, silicea, pulsatilla, china, veratrum, lachesis, mercurius, colocynth, chamomilla, sulphur.

Erysipelas. — Remedies : — Aconite, belladonna, bryonia, pulsatilla, rhus, arsenic, lachesis, sulphur, copper.

Carbuncle. — Remedies : — Lachesis, silicea, arsenic.

Chilblains. — Remedies : — Nux vomica, pulsatilla, belladonna, rhus, nettles, arsenic, sulphur.

Corns. — Remedies : — Arnica, ammonia, bryonia, nux vomica, rhus, ignatia.

Scabies, Itch. — Remedies : — Sulphur, mercurius, veratrum, silicea, sulphuric acid, arsenic, dulcamara, pulsatilla.

Herpes Circinatus, Ringworm. — Remedies : — Rhus, sulphur, calcarea.

Scald-head. — Remedies : — Rhus, sulphur, arsenic, dulcamara, bryonia.

Inflammation of the kidneys. — Remedies : — Aconite, cantharides, arsenic, sulphur, mercurius, arnica, nux vomica.

Cystitis, inflammation of the bladder. — Remedies : — Cantharides, pulsatilla, digitalis, arsenic, carbo-vegetabilis, sulphur, nux vomica.

Gravel. — Remedies : — Sarsaparilla, nux vomica, graphites, sulphur, cannabis, lycopodium, calcarea.

Retention of the urine. — Remedies : — Aconite, camphor, arsenic, phosphorus, belladonna, cantharides.

Difficulty in discharging urine. — Remedies : — Aconite, sulphur, belladonna, cantharides, opium, pulsatilla, spirits of camphor, mercurius, nux vomica.

Suppression of urine. — Remedies : — Aconite, cantharides, pulsatilla, camphor, belladonna, opium, lycopodium,

Diabetes. — Remedies : — Veratrum, mercurius, nitric acid.

Hæmaturia. — Remedies : — Cantharides, quinine, pulsatilla, mercurius, sulphur, ipecac, camphor, carbo-vegetabilis, arnica, nux vomica, nitric acid, aconite, squills, zinc, calcarea, petroleum, cannabis, cocculus indicus, capsicum.

Gout. — Remedies : — Aconite, pulsatilla, arsenic, iron, nux vomica, bryonia, sanguinaria, sulphur, saffron.

Rheumatism. — Remedies : — Aconite, bryonia, sulphur, belladonna, rhus, chamomilla, ignatia, conium, mercurius, lachesis, pulsatilla, arnica, mezereum, euphorbium, pink root, digitalis, phosphorus, veratrum, caustic.

Lumbago. — Remedies : — Aconite, bryonia, nux vomica, rhus, belladonna, pulsatilla, mercurius.

Ophthalmia. — Remedies : — Aconite, belladonna, nux vomica, cinchona, arsenic, euphrasia, ignatia, pulsatilla, mercurius, sulphur.

Scrofulous Ophthalmia. — Remedies : — Arsenic, conium, crude sulphur, lime, bitter sweet, iron, graphites, gold, lycopodium, indian hemp, chamomilla, digitalis, iodine, mercurius, corrosive sublimate, magnesia, nitric acid, lachesis, cinchona, pink root.

Ulceration of the cornea. — Remedies : — Nitric acid, arsenic, euphrasia, sulphur, calcarea, mercurius, lachesis, silicea, nitre.

Epistaxis. — Remedies : — Aconite, belladonna, bryonia, mercurius, carbo vegetabilis, graphites, pulsatilla, calcarea,

arnica, rhus, iron, sepia, nux vomica, lachesis, bryonia, dulcamara, saffron, musk, ammonia, silica.

Stomacace. — Remedies : — Mercurius, nitric acid, nux vomica, capsicum, carbo-vegetabilis, sulphur, nitre, borax, iodine, lemon juice, dulcamara.

Scurvy. — Remedies : — Vegetable carbon, mercurius, nux vomica, pulsatilla, sulphur, creosote, belladonna, nitric acid, quinine, alum, arnica, chamomilla.

Ascites. — Remedies : — Arsenic, cinchona, iron.

Anasarca. — Remedies : — Hellebore, bryonia, mercurius, arsenic, phosphorus, iron, colchicum.

Hydrothorax, dropsy of the chest. — Remedies : — Arsenic, dulcamara, digitalis, pink root, bryonia, aconite.

Hydrophobia. — Remedies : — Belladonna, hyoscyamus, stramonium, cantharides.

Amenorrhœa. — Remedies : — Nux vomica, sulphur, opium, aconite, veratrum, pulsatilla.

Menorrhagia. — Remedies : — Nux vomica, chamomilla, sabina, ignatia, platina, veratrum, sulphur.

Dysmenorrhœa. — Remedies : — Pulsatilla, belladonna, nux vomica, coffea, sulphur, calcarea, chamomilla.

Turn of life. — Remedies : — Cocculus, aconite, pulsatilla, nux vomica, lachesis.

Leucorrhœa. — Remedies : — Pulsatilla, china, calcarea.

Hysteria. — Remedies : — Calcarea, nitric acid, veratrum, belladonna, pulsatilla, gold, stramonium.

Difficult dentition. — Remedies : — Chamomilla, bryonia, zinc, sulphur.

Sugar globules are medicated with these remedies, in the third to the sixth potencies.

Method of preparing the sugar globules, from Jahr and Gruner, p. 27.

These are made by confectioners, and are composed of sugar and starch; they can be had of different sizes, from that of a millet-seed to that of a buck-shot. The whitest, dryest, and hardest, should be selected for medicinal use; they should be all of equal size, and not mixed with sugar-dust. After having moistened the globules with the medicine in some suitable vial, we turn them out on paper with raised edges, and agitate them until they cease to adhere one to the other. Should we afterwards wish to put them into the same bottle in which we had moistened them, we should take care to dry it also, before making use of it. The complete desiccation of the globules, before bottling them, is absolutely indispensable, since, without that precaution, they fall into powder in a short time, and lose their medicinal virtues.

A table showing the amount of alcohol required to form the different dilutions. One grain of the millionth degree of trituration, is added to 100 drops of alcohol, and one drop of that to 100 more of alcohol, making the first dilution.

First	attenuation = 1 =	100 = hundredths
Second	" = 2 =	10,000 = ten thousandths.
Third	" = 3 =	I = millionths.
Fourth	" = 4 =	100 I = hundred millionths.
Fifth	" = 5 =	10,000 I = ten thousand millionths
Sixth	" = 6 =	II = billionths.
Seventh	" = 7 =	100 II = hundred billionths.
Eighth	" = 8 =	10,000 II = ten thousand billionths.
Ninth	" = 9 =	III = trillionths.
Tenth	" = 10 =	100 III = hundred trillionths.
Eleventh	" = 11 =	10,000 III = ten thousand trillionths.
Twelfth	" = 12 =	IV = quadrillionths.
Fifteenth	" = 15 =	V = quintillionths.
Eighteenth	" = 18 =	VI = sextillionths.
Twenty-first	" = 21 =	VII = septillionths.
Twenty-fourth	" = 24 =	VIII = octillionths.
Twenty-seventh	" = 27 =	IX = nonillionths.
Thirtieth	" = 30 =	X = decillionths.

HYDROPATHY.

By Hydropathy is understood a system of medical practice, in which water, in its various applications, constitutes the only remedy. R. T. Trall, M. D., in his work on the hydropathic system of practice, states, that in order to understand the philosophy of water-cure, it is necessary to understand the physiological relations of water to the healthy organism. These he states in the following propositions:

“1. Water constitutes the greater proportion of the entire bulk of the body.

“2. Water composes more than three-fourths of the whole mass of blood, more than seven-eighths of the substance of the brain, and more than nine-tenths of the various colorless fluids and secretions.

“3. Water is the only medium through which waste, or effete particles of extraneous matter, are conveyed from all parts of the system to the excretory organs to be expelled.

“4. Water is the only solvent diluent and detergent in existence, for animal and vegetable excrementitious matter.

“5. Water is the only material capable of circulating in all the tissues of the body and penetrating their finest vessels, without vital irritation or mechanical injury.

“6. The only morbid effects result from improper temperature, and over-distension of the hollow viscera, or circulating vessels, from excess of quantity — effects never necessarily unavoidable.”

Hydropathists claim disease to be the result of the misuse or abuse of some one or more of the hygienic agencies, such as bad air, impure light, defective aliment, indolence, &c. They still further claim, that medicinal drugs never tend to correct the functional disturbances produced by these morbid influences, although animal organism consists

of true medicinal elements, and for the want of a due amount of which, disease is frequently produced. The teeth cannot be developed without lime, carbonic and phosphoric acids, nor the enamel without fluoride of calcium. Healthy bile, mucus, sweat, saliva, tears, cartilage, &c., all contain carbonate of soda, and if the soda is deficient, these fluids are diseased. Phosphate of lime is one of the constituents of serum, saliva, bones and muscles, which may become diseased by a deficiency of this material; by administering this article to the patient, he is restored. Hydrochloric acid is one of the ingredients of gastric juice, a deficiency of which, causes dyspepsia; the most ample experience shows that salt will remedy the difficulty. Iron is one of the ingredients of the blood, and without it the blood is *anæmic*. Iron will correct the difficulty. The above facts, with many others that might be adduced to show the utter fallacy of depending entirely upon water to correct the abnormal conditions of the system, yet it is a valuable auxiliary. The various methods of applying water for the cure of disease, are the following:

1. The wet sheet pack: The mode of applying this bath, according to Dr. Trall, is as follows: Take a sea-grass or straw mattress, upon which spread from three to five large thick comfortables, then a soft flannel blanket, and lastly the wet sheet, wrung sufficiently so as not to drip. Two pillows placed upon the mattress are necessary for the head. The patient lying down on the back is quickly enveloped in the sheet, followed by the blanket and comfortables. A light feather bed may be thrown over the top, in which case two less comfortables will be required. If the feet remain cold, bottles of hot water should be placed to them. Headache is prevented by the application of cold packs. In wrapping up the patient, great care should be taken to turn the clothing snugly and smoothly around the neck and feet. For very delicate persons, the

sheet should first be wrung out of tepid or even warm water. On coming out of the pack, the plunge, douche, rubbing wet-sheet, or towel washing may be employed, as indicated.

This bath is used by hydropathists in a great variety of diseases, both acute and chronic. In chronic disease it is used for the purpose of producing reaction; hence the packing is continued for a considerable length of time, and a full amount of clothing is used. When it is used in acute diseases to overcome inflammation and restore the superficial capillary circulation, the water is used at a lower temperature, and the packs are more frequently changed. This method of applying water is a very favorite one among most hydropathists, in typhoid fever, inflammation of the bowels, lungs, &c.

The Half Pack Sheet.

The half pack is the application of the wet sheet to a portion of the body only; as to the bowels in Enteritis, or to the lungs in pneumonia. This bath is also used on feeble persons, and in chronic diseases where there is much debility. This method of applying water is a favorite one of mine, in all cases of inflammation of the lungs, and bowels, also in most chronic affections of the uterus.

The Douche Bath.

The douche bath may be applied either warm or cold. It is given by allowing a stream of cold water to fall upon a portion of the body from a height of four or five feet. The stream should be from one eighth to one half of an inch in diameter, and should be repeated from time to time as indicated. It is used in chronic affections of the liver, tumors, local rheumatism, inflammation of the brain, hip disease, &c. When the vital reaction is feeble, the water should be warm, but where it is vigorous, cold water should be used.

Dripping Sheet.

The dripping sheet is another form of applying cold water. It is given as follows: The patient standing in a tub, the sheet is suddenly thrown around his body, which it envelopes from the head to the feet, and the body is rubbed by the hands of the attendant, outside the sheet, for five or ten minutes, when the sheet should be removed, and the body rubbed with a dry towel.

This bath is used in the early stage of fevers, also in most chronic diseases. I have found this form of bathing a very convenient one, not only in removing disease, but when used once or twice a week an excellent preventive.

The Hip or Sitz Bath.

For the sitting bath, sufficient water should be placed in a tub to cover the hips and lower portions of the abdomen, when the patient is in a sitting posture. The water may be of any temperature to suit the indications. This bath is beneficial in diseases of the uterus, as leucorrhœa, dysmenorrhœa and prolapsus. In these diseases the baths are mostly used cold.

This bath is also used in dysentery, piles, hip disease, &c. The baths should be repeated as often as the nature of the case appears to indicate.

Shallow Bath.

This bath is taken in a tub large enough for the patient to sit upright with ease. The water should be from four to six inches deep. The temperature of the water, as in other forms of bath, should be warm or cold as indicated. The shallow bath is used in all cases where the sitz bath is recommended, and in many cases to much advantage.

Plunge Bath.

This process consists in immersing the whole body up to the neck in water quickly, where there is room sufficient for the patient to exercise his limbs under water. A plunge bath may be easily constructed where there is a running stream. A box eight or ten feet long, and five or six feet high, may serve a good purpose for this bath. This form of bath is of utility in all cases where there is sufficient vital reaction, except in organic disease of the heart, and tuberculous affections of the lungs.

Foot Bath.

By foot bath is meant merely placing the feet in warm water. This is a valuable auxiliary in acute and most chronic diseases. It acts as a revulsive to diseases of the brain, stomach and bowels. Where there is determination of blood to the head, stomach or bowels, the bath should be hot, and followed by brisk friction. The benefit of the bath will be much increased by the addition of lye and pulverized mustard, in acute diseases.

Head Baths.

The head bath may be given in two ways. By laying folded towels upon the head that have been wrung out of cold water, or by allowing a stream of water to fall upon the head. The most common method in acute diseases is to wrap the head in wet cloths, and change as often as they become warm. In some violent affections of the brain, more benefit may be derived from a stream of cold water falling upon the head from some distance.

Cataract Bath.

This bath consists in two streams of water falling obliquely upon opposite parts of the body. This form of

bath may be used for the same purpose as the douche, as also a substitute for the wave bath or plunge, when the patient is too weak to take the latter.

Dry Pack, or Sweating Bath.

This is managed as the wet-sheet packing, except for the wet sheet a dry blanket is substituted. In either process, wet cloths should be applied to the head, and plenty of air should be admitted into the room. This bath is useful where the patient has not sufficient vitality to render the wet-sheet pack or other cold applications practicable. Ague chills may be much lessened in their severity by this process of sweating.

The Vapor Bath.

This is valuable in colds the first stages of fevers, &c. The patient may sit on an open chair with a blanket of sufficient thickness to retain the steam pinned about the neck. A pan of water may be placed under the chair, in which hot bricks are immersed to keep a vapor constantly rising; or a small quantity of alcohol may be burnt beneath the chair, to produce perspiration. This bath may be continued from fifteen to twenty-five minutes.

The Wave Bath.

This consists in extending the body in a swift current of water. It is for the same purpose as the plunge bath.

The Rain Bath.

This is taken by walking in a brisk shower, dressed in thin apparel. This is used for producing reaction; it stimulates the glands, hence it is useful in scrofula. The walk should not be prolonged to produce fatigue; when the patient returns, the cloths should be removed, and the body wiped with a dry towel.

Portable Shower Bath.

This process may be performed by showering the body with an ordinary tin shower-pot.

The Affusion Bath.

This consists in pouring water over different parts of the body, while the patient is standing in a tub.

This is a favorite method of applying water in fevers and inflammatory diseases. Where this bath is used for cooling the body, it should be repeated until the object is accomplished.

Towel or Sponge Bath.

This bath consists in washing the surface with a towel or sponge. This is the most convenient of all the baths. It is used extensively in fevers. It should never be neglected in their treatment, but should be repeated two or three times a day. A small amount of saleratus added to the water is a valuable auxiliary.

Wet Dress Bath.

The patient is enveloped in a dripping night dress, placed in bed, and treated the same as in the wet sheet pack.

Leg-Bath.

The leg-bath consists in immersing the legs in a tub of water. It is used for gout, rheumatism, ulcers, diseases of the joints, &c.

Fomentations.

These are cloths wrung out of hot water, and applied to different parts of the body, as may be indicated.

Wet Bandages.

This is another method of applying cold or warm water to different parts of the body. The cold, wet girdle, is used to good advantage in prolapsus uteri, and leucorrhœa.

Hand Friction.

This should be applied after all baths. It is preferable to any other kind of friction. In all cases where baths are made use of to invigorate the system, friction should be applied until reaction is produced.

TEMPERATURE OF BATHS.* — Hot, warm, tepid, cool, and cold, are only employed as approximate terms. Water that feels hot to one may only be warm to another. The sensations are generally a better guide for regulating the temperature of a given bath than the thermometer; still the latter is indispensable in many cases, and in all, convenient. As a general rule, the more feeble and delicate the patient, the more strictly should we follow the test of his feelings, in administering tepid, warm, or cold baths. When the circulation is vigorous, and the vital temperature well developed, we may regulate any bath with sufficient precision by the thermometer. It is a useful precaution, when commencing treatment with very susceptible patients, to test their sensibility to different temperatures of water, after which the physician or patient can prescribe them thermometrically. Some Water-Cure books seem to make it an especial point, to be thermometrically exact in directing particular baths for given diseases: as, for example, sitz baths, at 59°; shallow-baths, at 63°; half-bath, 74°, &c. These nice distinctions are not to be arbitrarily imitated, but may be regarded as land-marks, to keep us within reasonable bounds.

Baths may be distinguished into cold, below 65° Fahr.; tepid, 65° to 80°; warm, 80° to 98°. But a better division may be made thus:

Very cold,	32° to 40°	Tepid,	72° to 85°
Cold,	40° to 55°	Warm,	85° to 98°
Cool,	55° to 65°	Hot,	98° to 115°
Temperate,	65° to 72°	Vapor,	98° to 125°

* Trall.

Chrono-thermal.—A system of medicine so called, from *chronos*, time, and *therma*, heat, first introduced by Dr. Dickson, of London, in 1836. He lays down the following propositions as the basis of his system :

“1. The phenomena of perfect health consist in a regular series of alternate motions or events, each embracing a special period of time.

“2. Disease, under all its modifications, is, in the first place, a simple exaggeration or diminution of the amount of the same motions or events; and, being universally alternative with a period of comparative health, strictly resolves itself into fever, Remittent or Intermittent, *Chronic* or *Acute*;—every kind of structural disorganization, from *Tooth-Decay* to *Pulmonary Consumption*, and that decomposition of the knee-joint, familiarly known as *white-swelling*, being merely developments in its course—*Tooth-Consumption*, *Lung-Consumption*, *Knee-Consumption*, &c., &c.

“3. The tendency to disorganization, usually denominated *Acute*, or *Inflammatory*, differs from the *chronic* or *Scrofulous* in the mere amount of motion and temperature; the former being more remarkably characterized by excess of both, consequently, exhibits a more rapid progress to decomposition or cure; while the latter approaches its respective terminations by more subdued, and, therefore, slower and less obvious terminations of the same action and temperature. In what does consumption of a tooth differ from consumption of the lungs, except in the differences of the tissue involved, and the degree of danger to life, arising out of the respective offices of each?”

The remedies used in the treatment of disease, Dr. Dickson terms *Chrono-Thermal*, from the relation which their influence bears to *time* or *period*, and *temperature* (cold and heat); *chronos* being the Greek word for time, and *therma* for heat or temperature. These remedies are

all treated of in the various modern works upon the *Materia-Medica*. The only agents this system rejects, are the bleeding lancet, the leech, and the cupping-instrument.

PHYSIOLOGICAL, PATHOLOGICAL, AND PRACTICAL CONSIDERATION OF FEVERS.

PATHOLOGICAL researches have not as yet been as successful in revealing the seat, nature, and character of fevers, as of some other diseases. This may be owing in part to the nature of the investigation. The investigation being mostly confined to autopsic appearances, while a correct physiological analysis of the symptoms manifested in the progress of the disease, has been in a great measure neglected.

In order to arrive at a correct idea of the nature of fevers, a study of the causes, symptoms, and effects, produced by the remedies, and the character of these phenomena, with those of organic modifications in a state of health, with microscopic autopsic appearances, will enable us to arrive at a more just conclusion relative to all the pathological changes connected with fevers.

The phenomena of fevers are so numerous and so different in appearance, that it would be almost impossible to give a minute description of them. There is not a single derangement of function, or of tissue, which I have not observed in these diseases. They have then no specific symptom nor pathognomic sign; even the hot skin, rigors, and accelerated pulse, exist in diseases when fever is not present. Although this is true relative to a single phenomenon of fever, there are a series of phenomena, which is so uniformly present in what is termed idiopathic fevers, that we call the disease fever, when the symptoms are manifested in the following order :

1. Nervous depression, characterized by languor, lassitude, and debility.

2. Rigors and chills, connected with superficial capillary congestion, an irregular pulse, and hurried and oppressed breathing.

3. Reaction, characterized by a dry tongue, scanty urine, and loss of appetite. When these symptoms appear in the order in which they are here laid down, we denominate the disease fever. Although the above series of symptoms must always be present in the above order to constitute fever, it by no means includes the entire number of symptoms present in this disease. These symptoms indicate the disturbance of, or abnormal manifestation of,

1. The nervous system, as indicated by the debility, lassitude, aversion to mental and physical exertions, restlessness, creeping chills, horripilations, alternations of flushing heat, and irregular breathing.

2. A hurried and irregular action of the heart and arteries, dependent upon the abnormal nervous manifestation.

3. Immediately following this increased circulation of the blood, is an increased and abnormal temperature, a derangement of the secretions, as indicated by the scanty urine, dry tongue, hot skin, increased thirst, anorexia, &c., giving unmistakable evidence of the entire inability of the nervous system to afford these important organs the necessary stimulus. In thus carefully noting the series of changes which manifest themselves in all idiopathic fevers, we can commence at the derangement of the brain and nervous system, and follow the entire series of physiological and symptomatic changes, as arising from, and dependent upon, the primary cause of this entire class of diseases, *i. e.*, a derangement of the brain and its appendages.

In our classification of fevers, we have adopted that

which appears to us to be the only one warranted by the manifestations of this disease.

1st. Ephemeral Fever is the simplest of all forms of fever, yet it manifests the entire series of phenomena; but, owing to the mildness of the cause, it lasts only twenty-four hours. The cure is effected by the recuperative powers of the system.

The next form is that of Intermittent Fever, in which so much of the cause is removed as to relieve the nervous system for the time, but not entirely relieving the system from the morbid influences. During the thermal changes of the body in rest and sleep, the poisonous cause makes a sufficient impression upon the brain and nervous system to obstruct the proper supply of vital stimulus to the dependent organs of the body, and the result is a repetition of the paroxysm or Intermittent Fever. If the shock received by the brain and nerves, is of sufficient intensity to prevent a temporary restoration and reaction, the fever is called Remittent or Continued. When the secretory and excretory system is so far deprived of the necessary stimulus as to produce an entire suspension of these functions, and the circulating organs are exceedingly languid from the same cause, the fever is called Typhus or Congestive Fever. When, in addition to these symptoms, a disorganizing tendency is manifested in the glands of the bowels, the fever is termed Typhoid.

The condition of the capillary vessels in fevers, as recorded by David Craigie, M. D., F. R. S. E., in his Pathological Anatomy, pp. 156 to 163.

“In fevers, whatever be the form, intermittent, remittent, or continued, the capillary vessels are the seat of disorder. Nor is the affection confined to the capillaries of one region, of one organ, or of one tissue. The seat of fever is to be sought neither in the capillaries of the

brain and spinal chord, nor in those of the lungs, nor in those of the alimentary canal ; but it is diffused over the minute ramifying communications of the aortic and venous branches, in whatever part of the body these communications are found. To establish the truth of this statement, it is requisite merely to consider the phenomena of fever in the living body, and its traces and effects in the dead.

“I presume that the affection of the capillary system of the brain, both cranial and vertebral, is too generally admitted to require being formally demonstrated. In point of fact, the pain in the head in the beginning of all fevers, the derangement of thought during their progress, and the tendency to stupor, and absolute coma towards the conclusion, are sufficient alone to prove disorder of the cerebral capillaries. But when blood or serous fluid is found effused into the ventricles, when the vessels of the brain are found turgid, distended with blood, and more numerous than natural, it is impossible to resist the inference as to the over-loaded state of the cerebral capillaries during life. I am aware that cases of fever are sometimes adduced, in which neither pain of the head nor deranged thought are observed. I can only say, that, among a very great number of cases which I have observed, though in a few the patient did not complain of headache, it was always possible to recognize more or less derangement of thought.

“In all cases, pain is felt when the patient coughs or stoops, or when the head is slightly shaken ; and when no pain is said to be felt, it indicates that the stage of natural sensation is passed, and that he complains not, because he does not feel.

“In ague, the oppression of the cerebral cavities may be so great as to constitute inflammation (*Siriasis Ægyptiaca*), or phrenitic ague ; or, in various degrees, the sleepy quotidian, the sleepy, lethargic, hemiplegic, carotic, and

apoplectic tertian, and the comatose quartan of practical authors (Werlhof, Torti, Lautter, Sydenham, Morton, &c), the same disease which has been named by Lancisi, Baglivi, and Morgagni, epidemic apoplexy.

“The disorder of the capillaries of the spinal chord is indicated by pain and weight in various parts of the column, by the derangement in the muscular motions, especially local palsy, *e. g.*, of the arms, legs, &c., by the tetanic spasms and convulsions taking place in many fevers. After death, much serous fluid flows from the *theca*; the vessels of the chord are distended and numerous; in all instances, serous fluid is effused, and sometimes pure blood issues from its capillaries.

“That the capillary system of the lungs is overloaded and oppressed in all fevers, is one of the most certain points in pathology. During the ague fit, the respiration is invariably quicker than natural, sometimes to the amount of thirty or thirty-six in the minute; the patient complains of sense of weight in the breast, cannot breathe fully, pants, and has frequent cough. In continued fever, the respiration is invariably quicker and more laborious than natural; a deep breath cannot be drawn easily, and more or less sense of weight and oppression is felt. I have found the respiration in continued fever so quick as thirty-six in the minute, while in ordinary cases, the application of the stethoscope indicates an embarrassed state of the circulation in the pulmonary capillaries. In persons predisposed, expectoration, streaked with blood (*hæmoptæ*), is not unfrequent during continued fever.

“The same conclusion is clearly established, by examining the lungs of persons cut off either by intermittent or by continued fever. In many instances of the former, it induces bronchial inflammation, or proceeds to actual peripneumonia or pleurisy, constituting the catarrhal, pneumonic, or pleuric tertian respectively (Werlhof, Torti,

Lancisi, &c). In the latter, the bronchial mucous membrane is always more or less red, sometimes crimson or purple, or of a deep brown color, rough and much thickened; the sub-mucous tissue is brown and loaded with serous fluid; and the minute vessels are much distended with dark-colored blood. The bronchial tubes are very commonly, in fatal cases, perfectly filled with thick, viscid mucus, which adheres to the inner surface of the bronchia membrane. The serous surface of the organ is generally livid or marbled from this cause; but the pleura itself is not much changed, save from the bloody serum discharged into its cavity. The lungs, in totality, are generally dense, and firmer than in the natural state.

“These changes arise from the minute ramifying vessels at the termination of the pulmonary artery, and the organs of the pulmonary veins being unusually loaded with blood. As they are more so than can be readily affected by the ordinary quantity of air admissible in such a state, imperfect respiration and undue change of venous blood contributes powerfully to the bad symptoms and the unfavorable termination of the disease. In such a state of the organs of respiration, the bronchial arteries are less able to counteract the bad effects of imperfectly respired blood, in so far as they receive from the aorta blood which has not been sufficiently arterialized.

“In the capillary system of the chylopoietic and assistant chylopoietic viscera, traces of the same condition may be recognized, both from the symptoms during life and its appearance after death. In these organs, two capillary systems may be distinguished, a primary and a secondary one. The primary is that which consists of the ultimate divisions of the splenic, gastric, and duodenal arteries, and of the superior and inferior mesenteric arteries, and their corresponding veins, which afterwards terminate in the splenic and superior and inferior mesenteric veins. The

secondary capillary system is that which results from the union of the minute extremities of the portal vein, and of the hepatic artery with those of the *vena cava hepatica*.

“It is unnecessary to dwell on the proofs of the loaded state of the capillary system of the alimentary canal. It is sufficient to remind the student that the furred or brown tongue, the thirst, the sense of internal heat, the loathing, squeamishness, and sometimes sickness, with weight, oppression, and tenderness of the epigastric region, sufficiently demonstrate the morbid state of the capillaries of the œsophagus, stomach, and duodenum; while the constipation of the bowels at the commencement, insensibility to cathartic medicine throughout, and occasional looseness at the conclusion, indicate the deranged condition of those of the intestines. After death, the minute vessels of the whole of these parts are found much distended with blood, generally dark-colored.

“In one form of fever, the abdominal or intestinal typhus, the ileum and its mucous follicles are very much affected. The follicles become enlarged, elevated, and prominent, and swelled in consequence of their proper tissue being attacked, and perhaps their secreting pores being obstructed. The apices become dead, and are thrown off in the form of sloughs; and in their place are left small ulcers, which, in no long time, enlarge, spread, and increase in depth. These changes may take place either in the isolated follicles, or in the aggregated patches, or in both orders of glands.

“In certain forms of fever, there are pain, distension, and uneasy sensations in the right iliac region; and when percussion is employed, the sound emitted is dull, while a peculiar croaking noise is heard, and a gurgling movement is felt beneath the fingers, as if produced by air and liquid moving within the intestine.

“These symptoms continue the greater part of the

duration of the fever ; and though they are abated by local depletion, by means of leeches and laxative medicines, they do not disappear until the fever itself either abates or altogether retires.

“ The portal vein constitutes, among the vessels of the digestive organs, a secondary capillary system, in which the blood is not less accumulated than in the primary one. It may be thought that, as the blood is accumulated in the first, it ought not so readily to find its way into the trunk, branches, and ramifications of the second.

“ But this objection will vanish, when it is remembered that, at the same time, both the primary and secondary system of capillaries become overloaded. This state of the capillaries of the portal and hepatic system is established by the appearance of the liver in persons cut off by fever.

“ The spleen may suffer so much from this capillary distension as to resemble a mass of clotted blood without trace of organization. This morbid and extraordinary distension of the primary and secondary capillary systems of the chylopoietic organs, though distinct enough in the fevers of temperate countries, is most conspicuously demonstrated in the agues and remittents of warm climates, and especially in the severe and extreme form termed *yellow fever*. In the former, great sickness and epigastric tenderness, with more or less vomiting, are frequent ; and, in the latter, constant symptoms. The vomiting, however, is not bilious, as has been too generally imagined. It is, at the commencement, always a watery fluid, evidently derived from the capillaries of the gastric, and, perhaps, from the duodenal mucous membrane. After some time, it begins to be mixed with bile, expressed, no doubt, from the gall-bladder by the pressure of the stomach in the act of vomiting. A much more uniform occurrence, however, if the disease does not subside spontaneously, or is checked

by art, is the gradual admixture of blood, somewhat darkened, with the watery fluid. This blood issues from the capillaries of the gastric and intestinal tissues by a process analogous to exhalation in the sound state, but differing in so far as, in the capillaries from which it proceeds, a degree of disorganization has taken place.

“As the blood escapes into the cavity of the canal, originally not highly scarlet, it is rapidly blackened by the action of the carbonic acid and sulphuretted hydrogen gases, at all times present in greater or less quantity. This bloody exudation is at first scanty, but gradually increases as the disease goes on, until it constitutes the greater part of what is discharged both by vomiting and by stool. In the former case, it forms the black-vomit or coffee-ground matter (*vomito prieto*), so frequent in cases of remittent or yellow fever. In the latter, it forms the dark, tarry, or treacle-like stools, mentioned by practical authors in the same disease. The description now given is general, and applies to this capillary disorganization, as it takes place both in bad agues and remittents, and in yellow fever. In the former it is less frequent, but, nevertheless, takes place sufficiently often. In the latter, it is seen in its most aggravated form, and is almost invariable in fatal cases. Its origin and formation have been traced in the most satisfactory manner by repeated dissections.

“The idea that black vomit is morbid or vitiated bile, deserves no attention. In some cases of severe yellow fever, a dark colored fluid of the same physical characters as those found in the intestinal tube, may be traced coming down the biliary and hepatic duct, from the *pori biliarii*. This, however, instead of being bile, is blood which has oozed from the hepatic capillaries, in the same manner as that from the intestinal ones.

“The capillaries of the urinary system are much affected

during fever. Both in intermittents and in continued fever, bloody urine has been discharged.

“In the same manner, the capillaries of the muscles, of the filamentous tissue, and of the skin, are morbidly distended. One of the most common symptoms of fever is pain, soreness, and a sense of bruising in the muscular parts and limbs in general. In fatal cases, when these parts are examined by incision, unusual vascular distension and extravasation of blood are frequently seen. The livid spots and patches (*molæpes*; *vibices ecchymosata*) are proofs of the same state of the capillaries of the filamentous tissue, as petechial eruptions denote this in the skin. In short, there is scarcely a texture or organ of the animal body, the capillaries of which are not disordered in the different forms of fever; and this disorder, instead of being confined to the capillaries of a single organ, is extended throughout the capillary system at large.

“It is doubtless true, that in individual cases, this disorder may be greater and more distinct in one set of capillaries than in another. In one set of patients, the capillaries of the brain may be most disordered; in another, those of the lungs; in a third, those of the intestinal canal; and in a fourth, those of the urinary organs. It is always found, however, in such cases, that the affection of one organ does not entirely exclude that of another; and while the capillaries of the one are very much affected, though those of the others are less so, they are by no means in the healthy state. In all cases of severe and exquisite fever, whether intermittent, remittent, or continued, the capillaries of the brain, of the lungs and heart, of the chylopoietic organs, of the urinary organs, of the muscles, of the cellular tissue, and of the skin, are affected nearly in the same degree.

“An important question is to decide the nature of this

affection. The dissections of Home, Plocquet, Mills, &c., as to the brain; those of Schenck, Morgagni, Lieutaud, Sarconi, and others, as to the thoracic organs; and those of Lieutaud, Petit, and Serres, Broussais, Lermnier, and Andral, Louis, Chomel, and Bright, as to the intestinal canal, might favor the supposition that the morbid process of fever consists in inflammation.

“Against this conclusion, however, various facts and arguments may be added.

“1st. In fatal cases of fever, unequivocal traces of inflammation are not uniformly or invariably found. The proportion in which these marks, as albuminous effusion, suppuration, ulceration, &c., are observed, is small, compared with the number in which accumulation of blood in the capillaries, and more or less disorganization of these vessels, are observed. 2d. In cases of pure, genuine, and unmixed inflammation of the internal organs, whether spontaneous or from injury, the concomitant symptoms, though febrile, are totally different from those that distinguish either intermittent or continued fever. 3d. The marks or effects of inflammation, which are found in the bodies of persons cut off by fever, are accidental complications, and may almost invariably be traced to inflammatory reaction supervening on the febrile process, in consequence either of the physical peculiarities of the individual, the local weakness of the parts, or the influence of external morbid causes. 4th. Inflammation is a local action confined to the capillaries of one tissue, or at most of one organ and contiguous tissues; and while the structure and functions of the organ may be completely impaired, those of others remain unaltered. In fever, on the contrary, the capillaries of all the tissues, and of every organ are affected; and while no individual organ is much affected at the commencement, every organ suffers a little in the general disorder of the capillary system. 5th.

Inflammation gives rise to albuminous exudation, suppuration, ulceration, and in certain parts, to serous, or sero-purulent effusion. In fever, the morbid state of the capillaries terminates in complete destruction or disorganization of their organic extremities, and the consequent oozing of blood, from the surface of the several membranes and organs.

In conclusion, though it may be regarded as established, that, during the morbid process of fever, the whole capillary system is unduly distended and loaded with an inordinate quantity of blood, which really moves more slowly and imperfectly than in health, we have no facts that enable us to determine what induces this peculiar and excessive accumulation. Much has been said lately of congestion, and especially of venous congestion. The state of the capillary system which I have attempted to describe is that of congestion or accumulation; and so far the hypothesis of congestion is intelligible. Of the existence of venous congestion, however, unless as an effect of that in the capillary vessels there is neither proof nor probability. It is not a primary, but a secondary, or rather a remote consequence."—(Marsh.)

The Condition of the Blood in Fevers.

"It is obvious," says Dr. Carpenter, "that increase of fibrine in the blood does not exist as the result of fever."

Dr. Andral has observed a marked diminution of fibrine in the blood in all idiopathic fevers; he also found the red corpuscles and serum slightly increased. It is probable, however, that the increase of red corpuscle is relative in proportion to the amount of fibrine, and not in proportion to the entire bulk of the blood. "In typhoid fever," says Dr. Carpenter, "the decrease in the proportion of fibrine is much more decidedly marked; and that it does not depend upon abstinence from food, as, in all cases, as soon

as a favorable change occurs in the disease, the proportion of fibrine is much more decidedly marked." "In malignant forms of fever," says Dr. Simon, "the blood frequently becomes so deteriorated in amount of fibrine as to completely lose the power of coagulation." Another remarkable change which has been observed in the blood in Typhoid and other malignant forms of fever, is the want of due arterialization, as indicated by its dark blue appearance in the veins and arteries, as well as that of the capillaries. This being a very important one in a practical point, I will introduce the remarks of Dr. Cragie upon this subject:

"What is the cause of these changes? It is reasonable to think that for the cause we ought to look in the lungs chiefly. The lungs, I have already observed, are in all cases of fever more or less disordered, their vessels are congested and oppressed; their action is impaired; and there is proof of great derangement in the action of the bronchial membrane, imperfect admission of air to the bronchial tubes and their membranes, and, accordingly, inadequate arterialization, or, it may be, the lowest possible degree of that function. These may be regarded as matters of fact, capable of demonstration. Does this morbid state of the blood, then, begin in the lungs or in some other organ or set of vessels? When we consider the large extent of the bronchial membrane; the fact that, upon it are ramified the capillary divisions of the pulmonary artery; and the fact that through these vessels passes the whole of the blood of the body; and the further fact of the manifest disorder of the whole blood of the system in fever, it is impossible to resist the conclusion, that it must be chiefly, perhaps solely, on the blood of the lungs that the cause of the fever begins to display its primary and initial operation.

"On the nature of this cause it is not possible to speak with confidence or certainty. But if the general opinion that it is a poison diffused through the air, be well founded,

it is not difficult to perceive at least some traces of its mode of operation. Whether that poison be extricated in the form of a vapor or exhalation from the surface of the earth, and is telluric in its origin; or is eliminated from vegetable matters in certain circumstances of decay or change; or from vegetable and animal matters conjoined; or is given off as a subtle effluvium from the bodies of living human beings, in circumstances unfavorable to ventilation and the healthy performance of the functions; or is the result of some unknown and inappreciable state of the atmosphere;—it must equally be inhaled in the air in inspiration, and thus thoroughly mixed with the blood of the lungs in successive acts of the function of respiration. If it be so mixed, it must be circulated with the circulating blood, and in this manner distributed through the whole vascular system to every organ of the body. In doing so, however, this poisonous material will have so altered the blood in the lungs as to produce in that blood, and in these organs, a more decided effect than elsewhere. The shock first inflicted on the blood in these organs appears, it is natural to think, the great cause of the loss of coagulating power and the impaired arterialization. We know that one of the great uses of the lung, next to or along with the arterialization of the blood, is to maintain the coagulating power, and restore it when impaired. It is, therefore, natural to infer, that when the coagulating power is diminished, it depends upon some important impediment to the function of respiration, and that when the function of respiration is imperfectly performed, that it should evince its effects in a diminished proportion of coagulating power.

If these views be well founded, it follows that, when the blood thus altered is circulated, however imperfectly, it must operate hurtfully on the organs to which it is transmitted. It must act, in truth, as a poison, and many of the phenomena of fever are similar, certainly, to the effects

of poison, especially a poison at first irritant, and then sedative and narcotic. This appears to be the mode in which, towards the latter stage of fever, its cause acts on the brain and spinal marrow."

The ancients supposed fever to depend upon a warfare between the vital forces of the body and some noxious element which had invaded the system.

Hippocrates ascribed the different fevers to the four humors; blood, phlegm, and yellow and black bile. Galen supposed that the different forms of ague depended upon the corruption of the different fluids. That quotidian arose from the corruption of phlegm, the tertian from the corruption of yellow bile, and the quartan from that of black bile. He also supposed that, in whatever part of the body the heat began, it ultimately terminated in the heart, causing increased motion of the blood and accelerated pulse, followed by an effort of the *vis vitæ* to expel the poisonous agents from the system, and to assimilate the healthy fluids to sustain the different organs of the body. Sydenham says, "that reason dictates that a fever is nothing else than an effort of nature to thrust from the system morbid matter, in order to restore the patient to health; that seeing it has pleased God, the Governor of all things, so to constitute human nature as to be subject to a variety of diseases; that these diseases are introduced into the system in the form of poisoned air and otherwise, and that when once introduced into the system they become so identified with it that it is beyond the art of man to separate it, hence nature has provided for herself a method and concatenation of symptoms, so that she might thereby expel the poisonous matter which would otherwise ruin the whole fabric. Avicenna attributed the phenomena of fever to the superabundance of the different humors. Dr. Stahl maintained that fevers depended upon plethora or overfulness of the vessels, and a depraved condition of the

fluids. Hoffman maintained that fever consisted in a spasm of the capillaries. He attributed the cause of these spasms to some morbid affection of the nervous system. Cullen contended that fever depended upon certain abnormal changes occurring in the brain. Dr. Benjamin Rusa, that all diseases are a unit; and that fevers, as well as other diseases, depend upon an irregular action, and this irregular action, in its turn, is the proximate cause of every form and modification of disease. *Ploucquet* claimed that all fevers were dependent upon inflammation of the brain. Broussais that all fevers depended upon an altered condition of the mucous surface of the stomach and bowels. That this alteration was mostly confined to the mucous follicles; and that, as the disease advanced, they passed into a state of suppuration. Relative to the opinion of Broussais, Dr. Andral remarks as follows: "Admitting that simple or follicular enteritis is the commencement of a great number of fevers, can everything be explained by them? We never thought so; and it has always appeared to us that these fevers never become severe except in consequence of a disturbance which supervenes in the innervation and hematosis. This has been very satisfactorily proved by Prof. Bouillaud, who has contributed to give considerable weight to the doctrine of the localization of fevers, by placing this doctrine on a broader basis, more particularly by establishing the reality of the alterations, which on the one hand the blood, and on the other the nervous centres, undergo in a great number of fevers. The part performed by these has been also clearly demonstrated by the valuable observations of M. Chaufford, of Avignon.

This disturbance of hematosis and innervation, which gives rise to the phenomena called adynamic and ataxic, or in other words, to the typhoid state, may be the result of several lesions, different in their nature and in their seat.

First, gastro-intestinal inflammations give rise to it more frequently than diseases of any other organ. Of these inflammations, some are directed principally to the intestinal follicles, which become tumefied, and ulcerate; others consist merely in a simple ulceration of the mucous membrane itself. Other organs also, however, though less frequently than the digestive tube, may become the occasion of that profound disturbance of innervation and hematosiis, a disturbance which constitutes the adynamic and ataxic fever of Pinel. Thus phlebitis, pneumonia, particularly in aged persons, erysipelas, phlegmon, inflammation of the urinary passages, an abscess developed in the prostate, metritis, several forms of inflammation of the liver, variola, acute inflammations of the synovial membranes, etc., may give rise to it. M. Boisseau has clearly proved this in his physiological pyretology, and it has been put out of all doubt by several other works; by those of Dance, in particular.

Thus the ataxo adynamic, or typhoid state, may be developed, in consequence of a great number of affections widely differing from each other: it is a collection of symptoms identical as to their ultimate seat, but not as to their origin. Thus symptoms, identical also as to their nature, differ only in their greater or less intensity; with regard to their progress and duration, they are subordinate to the progress and duration of the affection, in consequence of which the typhoid symptoms have been developed. If it be a primary alteration of the blood which gives rise to them, these symptoms may acquire, in a few hours, their highest degree of development; and, in some cases, even occasion sudden death. If the commencement be in an organ where inflammation is rapidly developed, as in a lung, or in a vein, the typhoid symptoms shall have a quick course and a rapid termination, similar to this inflammation. If, on the contrary, they are connected with

an inflammation, which, as that of the intestinal follicles, has stages, which it passes through with a certain degree of slowness, they will be like the inflammation itself, slow in their development, and slow in their termination, whether favorably or fatally.

This is, we think, all the difference between a typhoid fever, which is connected with phlebitis, for instance, and that which follows dothieritis. There will be, however, in each of them, some particular symptoms, which will depend on the local lesion, as the diarrhoea in the case of follicular enteritis. We may, no doubt, as M. Louis has done, reserve the term typhoid fever for the morbid state which proceeds along with the affection of Peyer's glands; this, however, is a distinction purely arbitrary; and, besides this mode of proceeding, seems to us to be attended with the inconvenience of thus designating a great number of cases of follicular enteritis, in which the term typhoid affection has no longer any meaning; for all cases of follicular enteritis, certainly are not accompanied either with stupor, or with the different phenomena of adynamic or ataxic fever; all do not resemble typhus: they are oftentimes mere inflammatory, bilious, or mucous fevers, to use for a moment the language of the *Nosographie Philosophique*.

We do not think it right then to retain the term typhoid fever, because this term leaves a vagueness in the mind, not consistent with science, and because it often fails in exactness, with respect to the symptoms which it represents. We admit as a possible, but never a necessary consequence, a *typhoid state* in a great number of diseases; that is to say, a state in which there appear some general symptoms more or less similar to those which characterize typhus. This state indicates that the disease no longer exists in the organ where it had commenced—it is, in some degree, the signal that the blood and nervous centres participate in

the disease. Notwithstanding our objections to the use of the term typhoid, I do not feel justified in introducing another term, although it might be equally euphonious, and nosologically more correct, but shall according to custom retain the term typhoid: in all cases using it in a nominative sense, without any regard to its qualifications of typhus.

By most European writers, typhoid fever has been, and is still considered the same as typhus; constituting the only essential fever not included in the modifications of intermittent. In the *Encyclopedia of Practical Medicine*, published in 1833, we find typhus fever "constituting one of the principal forms of continued fever; characterized by the earlier and more severe affections of the brain and nervous system, by the more constant changes which the mucous and glandular systems undergo; and in the advanced stages, by great prostration and symptoms of putrescence." And it is further added, "that it is not uncommon to find fevers at first very mild, assume by degrees the typhoid type."

And again, "there can be no doubt of every intermediate gradation between the common forms of intermittent, typhus, and typhoid, so that it becomes a matter of nicety to discriminate to which class any particular case or number of cases belongs. Sometimes, indeed, we find the one form passing into the other; more frequently mild forms lapsing into typhus or typhoid." Dr. Copland, speaking of typhus and synochial fevers, states, that they frequently run into typhoid. Observation has led me to conclude that the fever of this country, described by various writers as typhus, nervous, synochia, continued, putrid, &c., is a specific fever, dependent upon a specific cause; and that the supposed change in the type of fever, is not a change in its nature or character, but rather a discovery on the part of the practitioner of its true character. When we consider the close resemblance of all fevers in their initiatory stages, and the habit of most physicians of treating cases upon general prin-

ciples, we are not surprised that this error in diagnosis frequently occurs. We have every reason to believe that these supposed changes in the character of fevers are erroneous; for when typhoid fever is closely observed, it will be found to pursue a definite course, passing through regular stages, spreading by infection, and being marked by a distinctive rash, presenting all the characteristics of genuine exanthema, to which class it seems correctly and exclusively to belong. For several years I have considered this fever as entirely distinct from the intermittent and remittent varieties, and to belong to the same family as scarlatina, rubeola, &c. I was led to this conclusion by observing, in nearly every case, that the initiatory symptoms, as pain in the head, back, and calves of the legs, wakefulness, &c., subside from the third to the fifth day, and are immediately followed by an extraordinary redness of the surface of the body, which is, in all cases, preceded for several days by a similar congested appearance of the mucous membrane,—so far as it is exposed to inspection, as the mouth, rectum and vagina; and from the embarrassed respiration, anorexia, epigastric tenderness, and irregular condition of the bowels, there is every reason to believe that the entire mucous surface is affected in the same manner. This opinion is further supported by the fact that nearly all cases of typhoid fever in this country are preceded by more or less catarrhal symptoms, consecutive upon enteric and gastric irritation. The eruption is by no means uniform in its appearance or duration. In some cases careful observation is required to detect it, while in others it appears in large diffuse patches over the entire body. The appearance of this rash depends much upon various conditions; such as the severity of the attack, the power of the system to repel the eruption from the mucous surface to the skin, the physical condition of the patient at the time of the attack, the character of the medication, &c. It also varies much in appearance at different stages of the disease. In

the early stage being very pale, and scarcely perceptible; but as the disease advances, and the premonitory symptoms disappear, it presents a vascular erythematic character.

As the rash appears upon the surface, the mucous membrane presents more of its normal appearance; but whenever it recedes from the surface, the mucous membrane again becomes red and congested, and all the constitutional symptoms become aggravated. There is increased pain in the head and back, difficult respiration and constant gastric disturbance, which again subside on the reappearance of the rash upon the surface. This rash very much resembles that of scarlatina, except that it is less florid, yet, in several epidemics, I have seen the appearance so nearly allied as to lose its identity until the disease had reached the seventh or eighth day of its duration.

At first the eruption is pustular, *i. e.*, there are small papillary elevations, resembling very much the papillæ of the tongue, when they become elevated upon a red and congested base in the more advanced stages of the disease. The papillæ upon the surface of the body, however, are pale or of a darkish purple hue. The rash usually makes its appearance from the third to the fifth day; and as I have already remarked, may be seen upon the mucous surface some days previous to this. Its first appearance upon the surface is upon the bowels, back and neck. In more favourable cases, in the course of thirty-six hours from the first appearance of the erythema, its papillary character becomes plainly visible. In twenty-four or thirty-six hours after it is first seen, a small white vesicle appears immediately upon the apex of the papillæ, which writers term sudamina. These vesicles, being very small and transparent, are frequently mistaken for dry dermoid scales, which, to the casual observer, they very much resemble. They are filled with a thin watery fluid, which very readily escapes on the vesicle being ruptured. If the powers of the system are feeble, and

the fever is of an adynamic character, the vesicles remain small, and in the course of twenty or thirty hours after their appearance they lose their transparency, and present a faded and dingy appearance, and in some cases entirely disappear. In this event, not only the sudamina disappear, but the entire erythematic eruption recedes to the mucous surface. I am satisfied that the petechiæ are an enlargement of the glands of the skin, caused by the irritation of a specific poison, and that the sudamina are the result of an exudation of particles of lymph or albumen from the cutaneous capillaries. This eruption manifesting itself as it does in the *rete vasculosum* of the chorion always destroys more or less of the scarf skin. Previous to the appearance of the exanthema, the capillaries of the cuticle may be observed to be heavily loaded with blood which circulates with remarkable sluggishness until the eruption makes its appearance, when it circulates with more freedom, the skin becoming hot and dry. Whenever the deeper capillaries of the chorion become weakened either from imperfect nutrition, or from lack of nervous influence, the rete becomes injected, giving rise to petechiæ. Another point of interest in the exanthema is, that in all cases the petechiæ may be seen before the bleb or sudamina. But this requires careful observation, as in early stages of the disease, the rete has not a red or florid appearance, although it may be slightly edematous.

Another important feature of typhoid fever is the tendency to metastasis or recession of the eruption from the surface to the mucous membrane of the bowels, lungs, &c. The transfer of disease from one organ or tissue to another is of common occurrence; but in exanthema this appears to be especially the case. In scarlatina, rubeola, and typhoid fever, the recession of the erythema from the surface is always accompanied by serious constitutional disturbances, such as pain in the head and back, with greater epigastric and precordial pressure, high-coloured urine, anorexia, and in many cases,

nausea and vomiting. There is also strong tendency to disorganization of the mucous membrane, which is always preceded by a loaded or congested condition of the mucous capillaries. The weakened respiration and the albuminous appearance of the urine are among the first indications of this congested state of the mucous membrane. As soon as the erythema disappears, (if its disappearance is premature,) the respiration becomes quick, and the atmospheric air fails to penetrate the minute bronchia, and hence the blood is imperfectly supplied with oxygen, and the effete and waste tissues fail to be converted into products for elimination. If this condition continues, the blood loses its coagulating power (for in all cases the coagulating power of the blood is maintained by healthy respiration.) It also loses its bright scarlet appearance in the arteries and assumes a dark purplish hue, indicating that it has become over-loaded with particles of waste matter from the body. If this condition of the mucous surface of the body continues for any considerable length of time, the blood becomes entirely unfit for circulation in the minute capillaries, and the phenomena of life gradually fade, until the patient expires. Or if by a well-directed course of medication, or by natural active forces of the body, the erythema again appears upon the surface, respiration becomes natural,—the inspired air penetrates the minute bronchia, giving off its oxygen to the blood, and the zymotic products become converted into carbonic acid, uric acid, urea, perspiration, &c., and are eliminated from the system by its various emunctories. I am unable to state the precise time of the appearance and duration of the eruption in typhoid fever. In many cases of a mild form I have noticed the rash to appear on or about the fifth day, to desiccate on the seventh, and desquamate on the tenth. In other cases I have observed the rash in the very outset, and again it did not appear until the disease had progressed for twenty or even thirty days. In this event, however, the mucous

membrane becomes seriously disorganized, and in most cases there is severe hemorrhage. The rash, then may appear at different intervals or it may not appear at all, and I have seen it in more than one instance disappear after having been out for a few hours only. What is true in regard to the appearance and disappearance of the rash in typhoid fever, is equally true in other exanthematous diseases. Dr. Rogers states, that the eruption in measles will sometimes appear on the second or third day or even sooner, while, in other cases, it does not appear until the seventh or eighth.

The disappearance of the rash in measles, on the third or fourth day, caused by exposure to a cold current of air, or by improper treatment, is by no means an uncommon occurrence; and every one of the least experience in this disease, is familiar with the disastrous consequences of this metastasis. In scarlatina, it is not unusual for the efflorescence to appear and disappear. In malarial districts, nothing is more common than to have this appearance and disappearance of rash assume a regular periodical character. Of the absence of rash in scarlet fever, every physician is familiar. In the anginose form it frequently does not make its appearance at all; and when it does appear, it many times is not seen until the tenth or twelfth day. In the malignant form, the eruption is always much protracted in appearance, and in many cases fails to appear altogether. And when it fails to appear, the erythema being confined to the mucous surface, as in typhoid fever, the same disastrous consequences are produced. In order to still further support the preceding facts, and to understand the nature of typhoid fever as it manifests itself in this country, let us inquire if this disease is contagious. Upon this, Dr. I. G. Jones remarks: "In regard to the cause of typhoid fever, a great diversity of opinion is entertained among the most learned of the profession. Some contend with great earnestness that it is specifically contagious, and cite instances that it may seem diffi-

cult to explain to sustain the contagious character of the disease. Others again, equally entitled to confidence, from extensive observations, express themselves without any doubt in regard to its non-contagious character. It has always been a difficult matter to reconcile these apparently conflicting facts, and in view of the fidelity of the statements, made by individuals standing before the world and the profession, both unimpeached and unimpeachable, on both sides of the proposition, it may be thought impossible to do it. But in reviewing the whole subject, and examining the arguments and facts adduced by the partisans of both doctrines, I have at length, I think, discovered a satisfactory solution of the difficulty by which the facts claimed by both are readily explained and reconciled.

“From its general prevalence, ‘where human beings are crowded together, with insufficient or unwholesome food, in confined or vitiated air,’ such as hospitals and ill-ventilated prisons; the densely populated, crowded, and filthy portions of cities; among the soldiers of large armies in camps; and in the close and crowded holds of emigrant ships, the generally accredited opinion is, at the present time, with most members of the profession, both among contagionists and non-contagionists, that it is caused, in some way, by the effluvia arising from the decomposition of animal matter; or, in other words, that it result from a poisonous animal malaria.

“This conceded, it does not matter in what this effluvia consists; whether it be in the form of *animaleulæ*, mephitic gas, or animal fungi—either of which will explain the facts. But from this statement it will be seen that it may be either a contagious or an infectious disease, and the difficulty is not thereby removed. Let us see, however, if it cannot be reconciled better with one than the other.

“The laws of contagion are peculiar, and subject to few exceptions. All those diseases admitted to be contagious have their uniform periods of incubation, or latent periods;

their regular rise, progress, and decline, without any considerable variation, unless by some accidental occurrence they are made otherwise; and they are uniformly propagated by exposure. Such, it may be, is the case with all those contagious diseases of which we have any knowledge, and we conclude, therefore, these are the laws of contagion. In this definition we include that class of contagious diseases known to be propagated without actual contact; making a distinction between those thus communicated, and those requiring immediate proximity to the poison to be taken—such as venereal, gonorrhœa, itch, &c., which clearly are not subject to the same laws, and, I apprehend, should not be comprehended in the term contagion in its ordinary acceptation. These latter diseases, though they may be communicated directly from one person to another, are not governed by those general laws peculiar to the class of contagious diseases of which I am speaking; and, I think, therefore, should be regarded as propagated by what may be styled limited contagion, or, perhaps, with greater propriety, local contagion.

“How is it with typhoid fever? Its latent period is irregular and uncertain, varying from twenty-four hours to nearly as many days; and its rise, progress and decline, are little more regular or determined than its period of incubation; in some instances continuing from four to six weeks, in others terminating in a few days; and exposure to the disease is not necessary to its propagation, for it often has a spontaneous origin. We conclude, therefore, it is incompatible with the known laws of contagion, and hence cannot be contagious.”

In making these statements, Professor Jones betrays a lack of observation relative to contagious diseases, as it is a well known fact that small-pox, under eclectic treatment, is not only modified in severity, but that nearly all the premonitory symptoms are completely arrested; besides, there are scarcely

two cases, where the disease is allowed to run its natural course, in which the symptoms have any thing more than a general resemblance, and even these are symptoms common to most acute diseases in the early stages. Dr. Jones himself, in giving the symptoms of small-pox, states, that previous to the eruption, they are the ordinary symptoms peculiar to remittent fever; and that the only peculiar symptoms are the increased pain in the back and greater irritability of the stomach. What is true relative to the irregularity of the symptoms in small-pox, is equally true of measles, scarlatina, &c. Not only are these diseases irregular in the manifestation of their premonitory symptoms, but their entire course is marked by variations both as to duration and severity; as in some cases of scarlatina they are so mild as hardly to disturb the normal manifestation; while in other cases the most severe symptoms are manifested, and result in the most disastrous consequences. A moment's reflection will satisfy every person who has been at all familiar with exanthematous diseases, that the observations of Professor Jones relative to their symptomatic character must have been very imperfect. Without entering into a further discussion of this subject at present, let us inquire what are the facts relative to typhoid fever as a contagious disease. In 1851, typhoid fever attacked one of the inmates of a large building, located in a healthy village in Western Ohio. The building was occupied by several families, and every individual member had an attack of the disease. A few cases occurred in the immediate vicinity, otherwise the inhabitants of the village were entirely exempt. There was but little communication between the inmates of this tenement and the citizens of the town. In 1855, the disease appeared in a family in another town, and a large number were exposed. The fever spread until a general epidemic was the result. In many cases the disease only manifested itself in the mildest form; but in all cases the characteristic rash made its appearance. At the same time

the disease spread through the surrounding country, but in all cases the patient had been exposed, or lived in a contagious atmosphere.

Another fact that helped to establish in my mind the contagious character of the disease was, that during the first three weeks of the epidemic, the wind blew from the north-west, and the disease spread only in the opposite direction, unless the patient had been directly exposed to the infection. On the commencement of the fourth week the wind suddenly changed to the south, and continued to blow from that direction for some days. In less than two weeks the disease made its appearance in the opposite direction, and spread into the adjoining county. In 1858, this fever made its appearance in another town in Ohio. The first case was in the north-east part of the town, much elevated above the main village. The wind blew from the proper direction to carry the infectious atmosphere over the town, and the result was that the disease spread most rapidly, and a general epidemic prevailed. Instances might be multiplied to show with what uniformity the disease always spreads to the leeward. Not only is the infectious character of typhoid fever proved by these results, but the almost certainty of its attack upon nurses and attendants, unless they enjoy an immunity from it by a previous attack. I have conversed upon this point with many intelligent physicians of extensive observation, all of whom agree with me, that typhoid fever uniformly attacks nearly all, if not all, of the unprotected members of the family where it makes its appearance. I will relate one instance only as it occurred in my practice, in illustration of this fact. In 1857, a boy of some ten years of age was attacked by typhoid fever. Before he recovered, his sister, a few years older, came down; and, in two weeks, the father, mother, and two other members of the family, all with the same disease.

Four families in the immediate neighbourhood were soon

attacked in the same manner, and in the course of two months it manifested itself to a greater or less extent on all persons who had been engaged as nurses or attendants, not exempted from it by a previous attack. I could quote hundreds of similar cases which I have observed for the last few years. I find my observations verified in other sections of the country, in nearly every particular; so that I have become satisfied that typhoid fever in this respect, manifests all the characteristics of genuine exanthema. Although a second attack of this disease is unusual, yet I have seen all the characteristic symptoms the second time, and in one instance an individual had an attack at four different periods. But immunity from a second attack is quite as sure as from any other form of exanthema.

Genovese states, that during the universal prevalence of measles in 1787, he attended forty-six cases of both children and adults, who had already gone through with the disease some time before. Dubosque had occasion to treat several children for measles that he had previously carried through the same disease. Dr. Baillie states that he had occasion to treat five children for measles the second time. Every practitioner of any considerable experience in scarlatina and small-pox is familiar with instances of their second occurrence in the same individual. Dr. Morton states that he met with a case where the system derived no protection from repeated attacks.

Anatomical Character.—The anatomical character of fever varies with the type of the disease. In intermittent, autopsy has shown traces of inflammation of the arachnoid membrane of the brain. The liver is frequently the seat of lesion, and sometimes undergoes a change of structure. In chronic ague, it presents the appearance described by Dr. Craigie, caused by the congested condition of its capillaries. But of all the organs of the body, the spleen is the most uniformly affected. It is not only changed in structure, but

becomes very much enlarged, and in all fatal cases proves to be the principal organ on which the disease has spent its force. In remittent and congestive fevers, the essential anatomical character is alteration in the condition and structure of the liver and gall-bladder, although other organs, such as the spleen, lungs, brain, and we might add the entire capillary system, at times manifest organic lesion and congestion.

In typhoid fever the principal anatomical characteristic appears to be confined to the glands of the bowels. On summing up the locality of fevers, we may reasonably infer that the intermittent form is intimately connected with a deranged condition of the spleen, while the remittent and congestive spend their force upon the liver and stomach, and typhoid upon the bowels. Yet it is contrary to the universal characteristics of all forms of fever, to confine their anatomical and physiological changes to any definite boundary, as each and every organ of the body is necessarily more or less dependent upon the entire organism, which constitutes the whole. So disease, although local in its incipency, soon extends its abnormal influence to nearly if not every tissue of the body.

CONGESTIVE, OR TYPHUS.

In accordance with the observations of M'Intosh, Jones and many others, I shall consider typhus as one of the modifications of remittent fever. And as I have already stated the only essential difference between intermittent and typhus fever is that the former is only the manifestation of a moderate influence of miasmatic poison acting upon healthy tissues endowed with full vital resistance, while the latter is the result of a concentrated miasmatic poison acting upon unhealthy tissues, possessing feeble vitality. Hence typhus fever becomes prevalent after severe epidemic or endemic influences, as is shown by the prevalence of typhus fever during the famine of 1846 in Ireland. It also prevailed as

the result of enfeebled organism for a long time after the cause was removed. In 1847 Bellevue Hospital of New York, and many other hospitals in this country were crowded with Irish emigrants who were suffering from typhus fever.

Typhus fever prevails in all sections of the United States both as an epidemic and an endemic, and also as a sporadic disease. By Bartlett and many other American writers typhus is confounded with typhoid. Hence in their descriptions of typhus they have included all the essential symptoms of both. This is more especially the case with reference to the eruption which occurs in both these fevers. The eruption which occurs in typhus is the result of vitiated blood accumulating in the cutaneous capillaries, producing hyperæmia, ecchymosis, vibices, papillary elevations, &c., &c., while the eruption in typhoid, is, as I have already described, of a specific character and is dependent upon a specific miasm. For a full consideration of this subject the reader is referred to my large work on American Fevers, now in the course of preparation.

CAUSE OF PERIODIC FEVER.

Periodic fever is supposed to be principally dependent upon the poisonous influence of vegetable miasm upon the living organism. Hence it prevails, with few exceptions, in all parts of the world, but is most prevalent in hot climates, and in localities where the land is low and covered with abundance of vegetation.

The susceptibility of the disease increases towards the Equator, and diminishes as the distance from the Equator increases. This fever has prevailed at different periods, in all parts of the United States. But at the present time, the northern portions of New York and New England seem to be comparatively exempt from its influences. In all the Western and Southern states, periodic fevers are common,

especially in the vicinity of low, marshy ground, covered with heavy vegetable growth. Season and temperature have much to do in producing and modifying this disease.

The mild forms are confined to the northern section, while the most malignant forms prevail in the southern portion of our country, and during the warmest season of the year. Age has also much to do in its development. It is much more common in adult years than in early life. Males are more subject to it than females, and white people are more liable to be attacked by it than the coloured.

Of the nature of miasm, P. B. Jones, M. D., LL. D., thus writes:

Miasm* I believe to be *putrefactive fermentation communicated by allotropism*. We well know that in marshes, low lands, and on rocks, in moist weather the growth of microscopical algæ is very rapid, and this growth must, in some measure, disturb the normal relations of the constituents of the air, which having a power of diffusion unknown in any other mixture on the earth, spread with infinite speed through a large space. If a grain of musk, which is a solid body, can scent a room for twenty years, how much more must air, which is gaseous, be able to spread disease. There are, as well as the mechanical ingredients, oxygen and nitrogen in the air, many chemical ones, such as hydro-carbons, and oxy-carbons, and although these are in very small quantities, yet they are diffused, and any fermentation set up among their elements, or any change in the normal relation of their atoms, would spread, as miasma does, so long as there was any exciting cause. Putrefactive fermentation may begin with the growth and decay of minute vegetable life, and communicate itself to every other living thing in its neighbourhood, by a vibratile abnormalism in the constitution of the foreign matters in the atmosphere. These

* Eclectic Medical Journal of Philadelphia, page 496.

meeting any other living being, which is sensitively organized, and which is breathing the breath of its life, through its porous surface, give to it the germ of putrefactive fermentation, which rapidly spreads, and sends its decomposing vibrations to add to the common stock of death-holding miasma. This may go on for nights upon nights, the moist emanation charged with decayed vegetable matter, and algæ germs, which are developed by the day-light and sun's heat, until any particular locality, if it be low, may become a perfect magazine of miasma, on account of it being—not only, as it were—a pool of muddy water in the ocean, but, also, from its different specific gravity and composition, and yet, both of these be unappreciable to the chemist or physieist, whose tools of trade are not yet delicate enough to detect malaria. Now in such a situation as this, or when such a mass of miasmatic atmosphere is conveyed by the wind to a city where the dirty streets, or sluggish river, charged with sewerage, presents fit objects to receive and spread the destructive change: the mass of human beings who are surrounded by the influence of this atmosphere, are attacked at once, internally and externally, by the exciter to decomposition; on the one hand by breathing, and on the other by external ventilation; and decomposition commences in the body itself. A change is instantly begun to be effected in the physical arrangement of the chemically combined elements, the pores are closed by algæ, or a diseased perspiration, and the man or woman is prostrate with the prevailing epidemic. This may be of various kinds, traceable to the physical geography of the place, or the common habits of the community, and varying slightly in symptoms, according to the temperament, constitutions, or habits of the individual; but the cause is common, and the same.

It may be said, by some, that to imagine a capability of allotropic condition in the constituents of the animal or vegetable organism, one condition being health, the other, dis-

ease, is mythical and vague. But, for my own part, I cannot see when the same inorganic elements, some of which enter so largely into the constitution of organisms, are capable of assuming such different forms and properties, as carbon, phosphorus, and sulphur, why, when a putrefactive fermentation is set up, by the natural decomposition of quick-growing vegetables, or animalculæ, it should not be transmitted by organic allotropism, through atmospheric medium, and so induce a similar condition in the same substance in the human body. Investigation, careful, long, and patient, commonly proves this, and I earnestly invite Eclectic medical men to think, if it is worthy their investigation, so that they may either announce the folly of my hypothesis, or demonstrate to the world its truth. Once discover what miasm really is, and the preventive will quickly be found; a preventive more sure than draining, washing, and ventilation, as, from either of these precautions, although intensely necessary, in all communications, miasmatic diseases may easily be promulgated.

Whether the views of Dr. Jones, relative to the action of miasm be correct or not, there can be no doubt that during the decomposition of vegetable matter, disintegrated vegetable cells are set afloat and mingle extensively with the moist atmosphere. Whether the introduction of this protein matter be the only form in which this poison enters the blood and produces its devastating and disorganizing influence upon the animal economy, or whether it gives rise to some of the various forms of algæ, as suggested by Dr. Jones, I am not able to say. But in either case the cause is adequate to account for the morbid changes which follow its introduction into the system.

Miasm is supposed to be of two kinds, viz.:—animal and vegetable; and is supposed to be the essential, if not the only cause of fever. Miasm of animal origin is called *idio miasmata*, to distinguish it from that form of vegetable

miasm which has proved such a prolific source of our periodic fevers. Prof. I. G. Jones supposed that vegetable miasm gave rise to periodic fevers, while animal miasm was the only cause of typhoid.

This theory of Prof. Jones does not stand the test of analytical criticism. For, as we have in all cases of periodic fever animal miasm generated as the result of the rapid disintegration which occurs in the system, and the consequent vitiated exhalation, according to Prof. Jones' hypothesis, periodic fevers would be constantly assuming a typhoid character—and as persons exposed to periodic fevers, are not brought in contact with vegetable miasm, but with animal miasm—they would not contract periodic fever, but typhoid. The fact is, that persons exposed to disease are liable to be attacked by a disease *sui generis*.

Typhoid fever, as I have already stated, is a specific disease, and like others of its class, is dependent upon a specific cause, and never runs into or is developed from any other form of fever.

Who ever heard of small-pox occurring as the result of exposure to measles, or scarlatina from exposure to any other form of exanthema? Because we cannot explain the precise nature and cause of the specific miasm, it does not follow that we cannot study its laws and observe its influences. As it is with scarlet fever, measles and small-pox, so it is with typhoid fever.

The supposed changes of intermittent and remittent fevers into typhoid, are not changes into typhoid but into typhus, which is one of the conditions of intermittent or malarial fever, depending upon the formation of new and poisonous compounds in the system; such as carbo-hydrogen and sulpho-hydrogen gas; the formation of oxalic acid by a retention of urine in the bladder, or by a retention of uric acid in the blood and a lack of oxygen in the system to convert the various elements of nutrition into products for elimina-

tion and excrementition. Hence, the various molecules of matter which have lost their vitality and are undergoing fermentation, are re-absorbed and inoculate the entire system, destroying the continuity of texture, forming lesions and abscesses in different organs, and inducing that state of the system which has been erroneously termed typhoid, but which is typhus. By this it will be perceived, that while an external cause may contribute to the development of a disease, as remittent fever, the supposed typhoid condition is the result of those physical changes which arise from, and are dependent upon the primary cause. The various forms of intermittent fever, such as remittent, typhus, yellow, &c., represent these compound influences.

Anatomical Character of Fevers.

It must appear obvious to the reflecting mind, that to arrive at a just knowledge of the true pathological condition of the various organs of the body, a knowledge of the influence of medicine, as well as of the disease, is indispensable. As but few, if any cases of fever at the present time are allowed to run their natural course without being more or less disturbed by medical interference, and in many cases the medicines are of such a character as to destroy the continuity of the various internal organs and tissues with which they come in contact. When mercurial and antimonial preparations are taken into the stomach, they not only produce irritation and inflammation, but the vital resistance of the various organs being enfeebled by disease, the chemical forces overcome the vital, and the medicines unite with the various tissues, producing lesions, abscesses, ulcers, &c., &c., which in many instances are taken as the effects of the disease. Hence, a wrong diagnosis has been made, and a pernicious course of medication adopted. To arrive at a correct conclusion relative to the real autopsic appearance of the body as produced by disease, it is necessary either to examine subjects who have died without medication, or to ascertain what

appearances are attributable to the medicines and what to the disease. In describing anatomical appearances, I shall only mention such as I apprehend occur as the result of disease.

Anatomical Character of Intermittent and Remittent Fevers.

The *dura mater*, *pia mater* and arachnoid membranes are usually inflamed and their vessels congested. The ventricles are usually filled with blood and serum. The mucous membrane of the bronchia and the parenchymatous substance of the lungs, present a congested appearance, owing to the turgid condition of the bronchial and pulmonary capillaries. The liver is congested, its texture is less firm, and the colour is changed to a lightish gray. The spleen is usually very much enlarged, and the capillaries appear diseased and very much broken down. The glands of Brunner in the duodenum are red, congested and enlarged. The stomach is inflamed, and covered with chocolate-coloured granulations, and in many cases the mucous membrane of the duodenum and other portions of the intestinal canal are found in a ramollescent condition.

In Yellow Fever.—On opening the brain the *dura mater* will be found studded with dark-coloured spots, with patches of lymph here and there, and in most cases there will be infiltration of yellow serum to the ventricles of the brain. The substance of the brain is fine, and more vascular than in ordinary remittent fever. In many cases blood or serum will be found infiltrated into the thesia of the spine, and in some cases the spine is in a softened condition. In nearly all forms of fever the brain, bronchia and pulmonary organs will be found congested, and not unfrequently the alteration of structure characterizes the condition of those organs after death.

Dr. Ashbel Smith's description of the condition of the

stomach is as follows: "On pouring off the black vomit which the stomach in all fatal cases contained, and detaching from the mucous coat the adherent dark-coloured flocculi, this tissue was found of a dull pearlsh white colour, thickened and softened. In some cases the softening was so great that the villous coat could be scraped in portions almost into pulp with the fingers. The thickening was not uniform, but presented in portions rugæ, and an uneven surface like the unevenness of the rind of the lemon. There were a few points and some scattered stelliform particles of a bright red; but these points and patches would not, except in a single case, form by their aggregation a surface of an inch square. In two cases examined, the whole mucous coat presented the white, much thickened and softened condition just described, but in four cases, from three fourths to five sixths only presented this condition, commencing at the pylorus, and terminating within two inches of the cardiac orifice, whilst the remaining portion surrounding the cardia, was the seat of a most intense diffused red injection, preserved its usual firmness, was but little if at all thickened, and entirely destitute of flocculi adherent to the surface. This injection did not present pointed or stellated patches, but the blood appeared to be diffused throughout the mucous tissue, and the colour was more or less intense, in proportion to the quantity of blood contained in the different parts, and the hue was between venous and arterial blood. The line of demarkation between the pale or colourless and injected portions of the mucous coat was for the most part as well defined by the different thickness of the two portions as by their different colour; the white portion being thickened, whilst the red and engorged still preserved its normal thickness.

The intestines present a very similar appearance to that presented in the stomach. The appearance of the liver differs very much in different cases. It is stated however that in the majority of cases the liver is very much enlarged and

engorged with blood, often softened in tenure, and easily ruptured. The kidneys are of a yellow colour, and present signs of congestion."

The pathological condition of the various forms of exanthema, as typhoid, scarlatina, rubcola, &c., has already been measurably discussed. In all these various forms of exanthema the mucous membrane is the first and primary seat of the disease, and unless a proper metastatic treatment is pursued the mucous capillaries will remain in a constant state of congestion until their coats become diseased, and disorganization of the mucous membrane follows. In typhoid fever, small-pox and measles where the specific poison is allowed to spend its force upon the inner mucous surface, both the large and the aggregate glands of the stomach, bowels, and in many cases those of the bronchia, uterus, vagina or urethra will be found congested, enlarged, and in many instances their structure entirely changed.

PHYSIOLOGICAL AND PRACTICAL CONSIDERATIONS RELATIVE TO THE TREATMENT OF FEVERS.

As the blood plasm undergoes a continuous change in the peripheral system during the supply of nutritious material to the several tissues, it becomes a matter of necessity that it should also receive a continuous supply. This is afforded it by the chyle, a fluid which is the product of digestion and absorption. It is readily converted into blood, but this metamorphosis is dependent upon a certain inherent vital power possessed by the blood and the forces of oxygen. These changes consist in the conversion of the lymph chyle and fat globules into blood corpuscles: during this process carbon is excreted and oxygen absorbed. Physiologists suppose that the blood corpuscles are formed from the lymph by a capsule which is at first very thin, but subsequently be-

comes thinner, and is developed around the lymph corpuscle, which becomes filled with hæmato-globulin, and by the aid of oxygen is converted into the red corpuscles of the blood.

There are different theories respecting the manner in which the oxygen is taken up by the blood and conveyed to the peripheral system. Liebig maintains that this is effected solely by the iron in the corpuscles, while Mulder refers it entirely to the oxydation of the protein compounds. Liebig asserts that the corpuscles of arterial blood contain peroxide of iron; that in their passage through the capillaries they lose a portion of their oxygen and combine with carbonic acid, so that in the venous system they no longer contain peroxide, but carbonate of the protoxide of iron. When they reach the lungs an exchange takes place between the carbonic acid of the blood and the oxygen of the atmosphere. Mulder, on the other hand, denies that the blood corpuscles are conveyers of oxygen, and that iron is oxydized during respiration, as assumed by Liebig. He founded his objections on the following grounds:—The iron is so intimately connected with the other elements of hæmatine, that it cannot be removed even by long digestion in dilute hydrochloric acid; consequently it is not probable that it would be oxydized in the lungs. The consumption of oxygen and the formation of carbonic acid, says *Simon*, stand in a direct ratio with the amount of blood corpuscles, and with the number of respirations in a given period. Hence, he infers, that the oxygen taken up by the blood during the respiratory process is, for the most part, consumed in the metamorphosis of the corpuscles; and that the development of the blood corpuscles is conducted on the same principle as that of other cells; that is, the blood corpuscles exert a transforming influence on the surrounding plasma; they select from it the material requisite for their development, and reject the non-homologous products that are formed in it. That, among the matters that are taken up, there must be always free

oxygen. That blood contains a certain amount of fibrine, and that the respiratory process, not only increases its plasticity, but its quantity: also, that the fibrin diminishes in the blood whenever it is not sufficiently brought in contact with oxygen. According to Liebig the fibrine is the principal ingredient of the blood, and is identical in all its properties with muscular fibre and albumen. That albumen and fibrine, in all, contain seven chemical elements, among which are nitrogen, phosphorus, sulphur, potash, soda, sea salt, and the earth of bones. Liebig also states, that albumen and fibrine, in the process of nutrition, are capable of being converted into muscular fibre, and muscular fibre is capable of being reconverted into blood. All parts of the animal organism contain nitrogen; all of them contain, likewise, carbon and the elements of water. Hence all kind of food fit for the production either of blood or of cellular tissue, skin or muscular fibre, &c., must contain certain amounts of nitrogen, carbon and albumen, because these elements are essential to the composition of the various organs.

The process of respiration consists in a great measure in the exchange of carbonic acid gas for that of oxygen. The carbonic acid gas given off by the lungs in the act of respiration is derived from the blood, and the oxygen from the atmospheric air. The relation between carbonic acid exhaled and oxygen inspired is not always the same, but depends altogether upon the condition of the lungs, and the temperature and purity of the inspired air. Yet in order to maintain a normal condition of the human system, it is essential to always introduce into the lungs a sufficient amount of oxygen to disengage from the blood its carbonic acid and watery vapours. The usual quantity of oxygen necessary for this purpose in a healthy individual is 1.790 grains. This amount of oxygen introduced into the blood will disengage 13.380 grains of carbonic acid gas. The above amount of oxygen, when introduced into the blood, appears,

under ordinary circumstances, to be adequate to convert all the disintegrated carbonaceous portion of the human organism into carbonic acid gas, which, together with the watery vapour, and surplus of atmospheric air, is exhaled from the lungs: This vitiated air in a healthy individual, contains 4·334 per cent. per volume of carbonic acid. But when respiration becomes imperfect in any essential degree, it lessens oxydation of the carbonaceous substance of the blood, and consequently, the amount of expired carbonic acid is very deficient. As, for instance, when the respirations are doubled without diminution of the normal depth, the relative quantity of carbonic acid exhaled is about 0·907 per cent. less than in normal respiration;—when the respirations are trebled, 1·125 per cent.; when quadrupled, 1·292 per cent. Thus it will be observed that the number of the expirations are fractions of the corresponding numbers, expressing the per centage of carbonic acid, and that each expiration, of whatever length it be, attains an expiration value of 2·5 per cent., to which a second quantity of carbonic acid exactly proportionate to the duration of expiration is added. The depth of the respiration has also much influence upon the amount of expired carbonic acid. This is evident from the fact, that the latter part contains much more carbonic acid than the first. It also shows that the formation of carbonic acid occurs more extensively in the smaller bronchia and air vesicles than in the larger bronchia. Hence, in order to burn up the effete and dead portions of the tissues, it is not only necessary that respiration should be performed with a normal degree of regularity, but that each inspiration should be of sufficient fulness to completely free the minute bronchia and air vessels.

Before proceeding to the further examination of fevers, let us for a moment examine into the functions of the capillaries. We have every reason to believe that in these vessels every phenomenon that characterizes life, occurs, and that in fevers

of every grade the capillaries are the seat of the disease. They receive from the arteries blood which has been oxygenized and supplied with material calculated to enrich the various tissues of the body, as well as for the formation, by the organs, of the various secretory and excretory products. These changes all occur in the capillaries: they also take from these tissues their various products, such as carbonic acid, water, &c., and consign them in their turn to the veins. It is claimed by Lehmann that the normal changes that occur in the capillaries are, in part, dependent upon the mechanical structure of these vessels.

In speaking of the formation of the urine, he thus describes the mechanical arrangement of the capillaries: "As the vessels leading from the Malpighian bodies have a smaller diameter than those forming the bodies, and increased pressure must take place upon the walls of the former, by means of which the excretion of urine is probably effected: by the vessels surrounding the canaliculi contorti, the water is again absorbed from the urine, contained in the latter, the urine thus becoming more concentrated. It has also been proved by direct experiment, that the lateral pressure in the arterial system of the kidneys exerts a powerful influence upon the urinary excretions; when the tension of the blood in these vessels is raised, it increases; in the reverse, it diminishes. Since in the canaliculi contorti the fluid excreted gives up water to the blood again, it is explicable why rapidly excreted urine is watery, and that slowly excreted is concentrated, and why the urine never exceeds a certain degree of concentration. That the tension in the circulatory system depends upon the nervous influence, &c."

He further states, that "experiments have shown that by excitement of the vagi nerves the tension of the arterial system is diminished, and consequently the excretion of the urine is diminished." What is true in relation to the mechanical arrangement of the capillaries in the kidneys, is

equally true relative to their structure in the other organs and tissues in which excretion and absorption takes place. The metamorphosis of tissue which occurs in these vessels, however, must depend much upon the conditions of the circulation of the blood through them. For the purpose of a more complete understanding of the condition of the blood in these vessels, as well as the causes which contribute to the abnormal circulation through them, it will not be amiss to examine into the causes of this circulation, or the power by which the blood is propelled through the capillary system." Upon this subject Mr. Lehmann thus remarks:—

"The area of the capillary rete is enormously increased as compared with that of the arterial system; and the diminished force of the heart's action is, in all probability, insufficient to drive the blood over this vastly increased extent of surface. Some authors compute it as four hundred times as great. We also frequently see in disease a great disproportion between the heart's action and the capillary circulation; and in inflammation of one hand, for instance, the amount of blood passing through the corresponding healthy part, although the heart, in propelling this blood, must obviously act equally on both.

"These facts suffice to show that the capillary circulation is maintained by some power besides the action of the heart; and that the metamorphosis of tissue must take place in connexion with that function."

The forces contributory to the circulation of blood through these vessels, are, as described by Mr. Lehmann, "1st, the chemical attraction of the tissues beyond the capillaries, and to which they are indebted for their contents. 2d, the capillary attraction of the walls themselves." The capability of chemical affinity to produce molecular motions need not here be discussed. It must be evident that the tissues and organs will attract to themselves the arterial blood so rich in the oxygen which they need in their transformation,

while the nervous blood, loaded with carbonic acid, water and their other products, is forced on into the veins. The same takes place in the capillaries of the lungs. The blood which is rich in carbonic acid presses forward to exchange its excess for the oxygen which abounds in the air-cells; this done, it becomes indifferent, and is moved onwards by the *vis a tergo* of other portions pressing forward to make the same exchange. He also states "that whenever there is a deficiency of air in the lungs, there is found to be an accumulation of blood in the arteries." At the same time venous blood will be found accumulated in the lungs, giving rise to the congestion of those organs.

I have detailed thus minutely the condition and deficiencies of the capillary circulation, in order that we may be better enabled to understand the condition of this important class of vessels during the progress of fever. It has been observed that an excess of blood accumulates in the arteries whenever respiration becomes imperfect, or whenever the atmospheric air is deficient in oxygen. The deficiency of oxygen in the air-cells may be dependent upon a variety of causes; such as imperfect respiration, dependent upon mechanical pressure upon the chest, thus preventing a due expansion of the minute bronchia, by a congested condition of the bronchial mucous membrane, which diminishes the area of bronchial cavity, or it may depend upon a deficiency of oxygen in the respired air, &c. Whatever may be the cause of this deficiency of oxygen in the lungs, the effects are the excessive accumulation of blood in the arteries and veins, or that condition known as plethora. It will be noticed from the above facts that plethora is not dependent upon an excess of blood, but is simply the result of a disturbed circulation between the capillary and the larger vessels of the body dependent upon imperfect respiration. How unnatural, as well as unsuccessful is the attempt to remove this condition of the system by bleeding and purging, while

the entire course of the abnormal condition of the vessels is either overlooked or not understood.

I have already alluded to the functions of digestion and respiration as supplying the living organism with materials for nutrition, and the conversion of effete matter into carbonic acid, water, and other products for elimination. We now come more directly to consider the phenomena of fever with the causes which contribute to it. One of the principal causes of the phenomena is a functional disturbance of the circulatory system. As during the premonitory stage of the disease, while the patient only complains of debility and aching pains, with fulness of the head, it is not uncommon to witness variations in the capillary circulation: as, for instance, the superficial capillaries at certain times during the day may be observed to be loaded with blood accompanied with an increase of temperature, connected with a corresponding disturbance of the secretions and excretions. This phenomena, although frequently passing unobserved, is nevertheless uniform in its appearance during the stage of incubation. This increase of temperature and disturbance of the secretions is not the completion of the abnormal changes during the stage, as it is universally followed by a diminished circulation in the superficial capillaries, and corresponding increase of circulation in the deep-seated ones. This disturbed condition of the circulation in the superficial and deep-seated capillaries not unfrequently amounts to congestion of one or more of the internal organs, viz.: the brain, liver, lungs, stomach, spleen, kidneys, &c. The symptoms characteristic of these conditions are pain in the head, hurried and irregular respiration, anorexia, constipation, changes in the appearance of the urine, and alternations of temperature. Before the re-active stage of the disease becomes manifest, there is in all cases a pale and collapsed appearance of the surface. This symptom is dependent upon a deficient circulation through its structure. The effects of this imper-

fect circulation are the incomplete transformation of the disintegrated tissue into products for elimination, and a diminution of normal temperature. In this condition, the superficial capillaries become loaded with carbonaceous and other effete matter, which fails to be converted into carbonic acid, water, and other excrementitious products, and is retained in the system. The result is, that when the blood from any cause returns to the surface and contains its normal quantity of oxygen, the oxygen meets with an undue amount of combustive material, with which it unites, causing abnormal evolutions of heat, and a corresponding increase of temperature of the surface. Hence the hot and pungent state of the skin observed during the progress of fevers. It may depend upon the increase of transformation in the superficial capillaries, or to a spasmodic closure of the sudoriferous ducts, and a congested condition of the gland, thus preventing the escape of the watery vapour which is the medium for conducting the surplus of disengaged caloric from the living organism, which is thereby retained. Or the phenomena of heat on the surface may be caused by a defect in the process of transformation, as the oxygen may fail to unite with hydrogen in quantities sufficient to form watery vapours, thus preventing the escape of the excess of heat for the want of a proper conducting medium. Or all these causes may combine, and contribute to this phenomena. Thus, the excess of heat in fevers disappears whenever the excess of combustive materials is destroyed by oxygen, or whenever the conducting medium and elimination of heat corresponds with the amount generated. During this recession of blood, however, from the superficial capillaries, and its accumulation upon the internal organs, an abnormal change occurs in them, resulting in a disturbance between their organic and dynamical relations.

To show how little the necessity of pure air and healthy respiration in the treatment of fevers is appreciated, I will describe the condition in which I frequently find my patients.

Nothing is more common than to find them in small bedrooms, with doors and windows closed, thickly covered with bed-clothes, with artificial heat applied to the feet or other parts of the body—not unfrequently consisting of hot bricks, kept moistened with vinegar or water, thereby increasing the action of the vegetable or zymotic poison; besides, the moistened atmosphere is a ready conductor of the poisonous exhalations from the body to the lungs. In addition to all this, it is not an unusual thing to find that the evacuations from the bladder and bowels have been allowed to remain in the room.

In this condition the friends of the patient, aided perhaps by one who professes to be a physician, are attempting to sweat, puke, and purge him of fever. In cases of exanthematous fevers among children, this impure condition of the atmosphere so lessens the animal temperature and enfeebles the powers of life as often to produce death, even in the incipient stages of the disease, while in adults the early brain and nervous symptoms, the hot and dry skin, scanty urine, bile, saliva, &c., point directly to a diminished capillary circulation, an imperfect supply of oxygen to the vital organs. It is useless to attempt to relieve a patient in this condition by a course of medication. Hence, in all cases, whether of children or adults, the first and most important duties are to thoroughly cleanse the surface with soap and pure water, to place the patient in a large and well ventilated room, to remove immediately all excretions from the body, and to enjoin quietude and rest.

In the vicinity of marshes or other sources of impure air, the sick apartment should be so ventilated as to prevent the air which passes over them from entering it. When the depressed condition of the system and imperfect respiration is such as to require artificial heat, it is better to apply it by means of friction than in the usual manner, by hot cloths, bricks, etc.

The next important step in the treatment of fevers is to establish a systematic circulation through all parts of the body. And here the effects of pure air and healthy respiration are most marked.

In addition to this means of propelling the blood to the extreme capillaries, the proper evacuation of the stomach and bowels, together with the ligature to the arms and legs, the use of aconite and veratrum and a judicious use of baths, are among the most reliable means by which to accomplish this purpose.

As I have already remarked, during the progress of fevers, not only the circulation of the blood becomes disturbed, but respiration is exceedingly imperfect. In bilious remittent and continued fevers, respiration becomes much increased in frequency, but very essentially diminished in fulness; and upon ausculting the chest it is readily observed that the minute bronchia remain in a permanently collapsed condition, and the respiratory changes are confined to the larger bronchia. This constricted condition of the minute bronchia during fevers, no doubt, is in the first instance dependent upon the irritating influence of the malarial poison upon the minute bronchial nerves: as it is apparent that in all cases of fever, whatever be the nature of the poison that produces it, it enters the lungs with the atmospheric air, exerting its poisonous and sedative influence upon the minute nerves of the lungs before it reaches the blood to be distributed to the brain and other nervous tissues. That this hypothesis is not without foundation, may be inferred from the fact, that, in all cases of fever, one of the first symptoms is the imperfect manner in which these organs receive and expel atmospheric air. In bilious fever, the most minute air cells become spasmodically closed and impervious; while in typhoid, and some other forms of fever, they become permanently dilated and loaded with carbonic acid gas, which they have no power to expel. In both instances, imperfect respiration is the re-

sult; and, as I have already shown, in all cases where there is imperfect respiration, the normal changes which occur in the lungs become interrupted, and the blood is not only loaded with carbonic acid gas, but also with disintegrated tissue, which fails to be converted into products for elimination. The exhalations from the skin and lungs are but products formed by the chemical changes which occur in the various organs of the body, and these changes are the result of the chemical action of oxygen upon the various elements of the blood. The oxygen introduced into the system mostly passes through the lungs, and is carried by the blood to the various organs to perform its mission of removing from the blood those zymotic elements, which, if retained in the system, contribute so largely to the morbid changes which occur during the progress of fevers. Hence, in the treatment of all cases of fever, it is of primary importance to attend to the function of respiration, and to the condition of the inspired atmospheric air. The patient should be placed in a well-ventilated room, and instructed to take deep and full inspirations. Whenever the respiratory muscles become weak,—either from previous debility, or from the sedative influences of the poison which produces the fever,—the lungs should be fully inflated by the patient, and exhalation assisted by producing brisk friction over the abdomen, and by gently compressing the sides of the chest. This process of assisting respiration should be repeated as often as the circulation becomes disturbed, and the temperature of the body unequal. The salutary influence of deep and full inspirations in equalizing the temperature of the body is most marked. I have frequently noticed the hands and feet to become essentially warmer after having completely inflated the lungs only for a few minutes. In one case of typhoid fever, where the extremities had been cold for upwards of twenty-four hours, external heat failing to produce anything like a normal degree of temperature, by gently pressing the side of the chest during

expiration, and instructing the patient to completely fill the lungs with pure air, the extremities became warm; and by continuing the process for a day or two at intervals, a normal temperature was permanently established. Not only has this free introduction of oxygen into the lungs the influence to equalize the temperature of the body, but it causes a rapid conversion of the various abnormal elements of the blood into urea, uric acid, carbonic acid, and other products for elimination. It can hardly admit of a doubt that the scanty urine which is such a characteristic symptom in nearly all forms of fever, is as much dependent upon a lack of oxygen in the blood as upon the imperfect capillary circulation through the kidneys. This is obvious from the fact that in many cases where the urine has been exceedingly scanty for several days, the quantity becomes materially increased after the blood has been liberally supplied with oxygen through the lungs. What is true with regard to the formation of urine is equally true with reference to the formation of bile, saliva, and all other products for elimination.

PRACTICAL OBSERVATIONS RELATIVE TO THE TREATMENT OF FEVER AND INFLAMMATION.

We have already shown that whatever the cause of fever or inflammation may be, one of its essential effects is to disturb the equilibrium between the external and internal capillary circulation, and that in the majority of cases during the earlier stages of the disease, the blood recedes from the surface and accumulates in the deep-seated vessels.

The indications of treatment, are to induce a return of the blood from the capillaries of the liver, stomach, spleen, bowels, lungs, &c., to the surface; to remove the cause of the disease, repair constitutional and local injury produced by it, and to induce it to resume circulation through all parts of the body.

The measures to be adopted to accomplish this, depend very much upon the severity of the case, the constitution of the patient, &c. In many cases where the attack, either of fever or inflammation is mild, but little more is necessary than to place the patient in bed, bathe the surface in warm lye water, followed by brisk friction with a crash towel, and a few doses of aconite. In other cases in order to restore the equilibrium of the capillary circulation, a much more energetic treatment is necessary, such as a thorough evacuation of the stomach and bowels by lobelia and podophyllin where it is not counterindicated; the use of stimulants, such as capsicum, xanthoxilin, hot toddy, &c., together with mustard pastes applied to such organs as appear to be suffering most from excessive accumulation of blood, followed by hot packs, general bathing, friction, stimulating liniments, jugs of hot water, steaming bricks, &c. In no case of an acute character should the attendant fail, if possible, to restore the equilibrium of the circulation during the initiatory stage of the disease, otherwise the blood, by being allowed to remain in excess in the internal vessels, will produce over distention of them, stagnate, and during its decomposition transmit its disorganizing influence to them, causing serious organic lesions. The great mischief of all former systems of medicine consists in this entire inefficiency in the treatment of disease in the early stage. Indeed, the blind dogma has been both taught and practised, that nearly all acute diseases have a definite course to pursue. Hence, the object has been more to modify than to interrupt the progress of disease. The stomach and bowels should also receive especial attention during the early stage of the disease. The importance of this I have frequently noticed, by the negligence of Homœopathic practitioners. I have met with cases where that class of physicians, when called, would at once commence giving their infinitesimal doses of aconite, arsenic or mercury, when, at the same time, the patient's stomach was most intensely

engorged with meat, vegetables, puddings, beer, old whisky, patent pills, nauseous drugs, &c. It is by no means uncommon that patients are attacked with some acute disease soon after a hearty meal or a debauch, and in nearly all such cases a large quantity of semi-putrid food and other noxious agents are found in the stomach and bowels. A case came under my observation where a physician was treating gastritis in a child, the cause of which neither he nor the parents understood. The physician was constantly giving drugs, as he said, to allay the tendency to vomit, and to reduce the inflammatory condition of the stomach. On giving the child a lobelia emetic, a large quantity of green chestnuts were thrown up, which had lain in its stomach for several days. In this case, as in all others of a similar nature, the medicine, however well adapted it might be to remove inflammation, could not accomplish its object.

In the treatment of typhoid fever, this attention to the condition of the stomach is of primary importance, as in many cases, during the premonitory stages of the disease, the patient resorts to self-medication, taking patent pills and other mixtures. It is by no means uncommon to find patients who have, during the early stage of the disease, produced fatal injury to the stomach, bowels, liver, &c., by some of these humbug nostrums. To attempt to relieve the patient with aconite, veratrum, gelsemin or any other specific remedy while the stomach is in such a condition, is worse than folly; and the fact that they have been swallowed for a considerable length of time, is no assurance that the stomach is free from them. I have known patent pills to be rejected after having lain in the stomach forty-eight hours. Nearly all of these pills are made of aloes, gamboge, calomel, &c., and when the stomach is in a feeble state, even days may elapse before they will be dissolved and distributed to the various tissues to produce their mischievous effects. But all this time they are producing most serious lesions of the stomach

and bowels. In low forms of fever, I have seen hemorrhage, inflammation and gangrene follow their use almost immediately. From the above observation it will be seen, how important it is, before we attempt to medicate a patient, to ascertain the condition of the stomach and bowels—whether the stomach is not in such a condition as to neutralize the medicine, or whether its powers are sufficient to carry the medicine forward to the bowels, blood, &c., and thus enable it to reach its destination and perform its mission of cure. Thus, it will be seen, that the first object should be to ascertain the condition of the stomach and bowels, and prepare them to distribute the medicine to the various tissues. This can be accomplished by giving a lobelia emetic, which can always be done with safety. Previous to giving the lobelia, however, the stomach should be warmed by means of a few draughts of ginger tea, camomile, pennyroyal or Thomson's composition. If the stomach is in an acid state, a few grains of super-carbonate of soda should be added. After the stomach has been thus prepared, twenty or thirty drops of the concentrated tincture of lobelia may be given and repeated every fifteen or twenty minutes until the stomach is evacuated, or from five to ten grains of the triturated lobelia may be used, or a tea may be made of pulverized lobelia seed by adding one teaspoonful to one half teacupful of warm water, and after steeping ten or fifteen minutes, give one teaspoonful every five minutes until it operates. Many of our physicians use the compound acetic tincture of lobelia, which answers a valuable purpose in many cases. After the stomach has thus been prepared, the next object to be attained is the preparation of the bowels. This can frequently be accomplished by giving a warm water enema. If one does not suffice, it should be repeated and followed by friction on the abdomen and back. If, notwithstanding this, the bowels still remain in a vitiated state, a mild dose of anti-bilious physic or a small dose of euonymin and neutralizing mixture should

be given. Ten grains of triturated euonymin and one ounce of neutralizing mixture for an adult may be given and repeated every two or three hours until the bowels are thoroughly evacuated. At the same time the stomach and bowels are being prepared to receive medication, the surface should be thoroughly cleansed by means of lye baths, the feet kept warm and the head cool, and the patient provided with a comfortable bed, pure air, and kept free from noise and confusion. It is now that the patient is prepared to receive specific medication, which must depend altogether upon the nature of the disease. If it be typhoid fever, the principal object is to keep the skin moist by small doses of aconite; say ten drops of the tincture in half a tumbler full of water, and one teaspoonful every half hour until moisture is produced, and afterward sufficiently often to keep up moisture of the surface. At the same time give small doses of macrotin and scrofularin, combined or in alternations, until the eruption, which is always during the early stages confined to the mucous surface, is transferred to the skin. If there are brain symptoms, as indicated by violent pains in the head, one or two grains of triturated belladonna should be given and repeated as indicated. If there are periodic symptoms, quinine and iron or some of the other anti-periodic remedies should be used until the periodicity of the disease is controlled. If there is tendency to ulceration, tincture of *rhus radicans* or baptisin should be used. If the nervous system becomes much involved, valerianate of ammonia and phosphorus, or the phosphates, as the phosphate of lime, soda, potassa, or the hypophosphates of the same will serve to prevent nervous lesions and remove the symptoms. Where the spinal capillaries become permanently loaded, as indicated by difficult breathing, irregular action of the heart, tendency to paralysis, &c., the spine should be thoroughly bathed with stimulating liniments which contain tincture of *nux vomica*, followed by mustard pastes and hot packs. Unless immediate relief

is thus afforded, from one half grain to one grain of the triturated strychnine should be given and repeated every two or three hours, until the spinal capillaries are relieved. In no case during the treatment of typhoid fever, should the stomach and bowels be irritated with doses of nauseating powders or drugs; nor should the patient be allowed to be in an erect position long at any time, until all the essential symptoms of the disease have disappeared.

BILIOUS INTERMITTENT AND REMITTENT.

In the treatment of these forms of fever, but little more is necessary than to prepare the system, as previously directed, and to give anti-periodics to interrupt the paroxysms, and hepatic remedies to remove portal congestion, as directed in the treatment of those diseases in the first part of this work.

YELLOW FEVER.

In the treatment of yellow fever, in addition to preparing the system previous to giving anti-periodic treatment, a thorough stimulating course should be pursued until re-action is thoroughly established. For this purpose capsicum and xanthoxylin pill should be used internally, and hot baths, friction and mustard poultices externally, until all symptoms indicating internal visceral congestion have disappeared. After which aconite veratrum and gelsemin should be used to control the fever, and anti-periodics to neutralize the malarial poison.

SCARLET FEVER, SMALL-POX, MEASLES, &c.

The same general preparatory treatment is indicated as in the other forms of fever; and afterwards the use of metastatic remedies, such as macrotin, scrofularin, bebeerine, capsicum, salicine, rhus radicans, baptisin, &c., should be used to main-

tain the eruption upon the surface, thereby preventing the disorganization of the mucous membrane.

INFLAMMATION.

In the treatment of inflammation after the preparatory course, gelsemin, veratrin or aconite are required to regulate the capillary circulation, followed by remedies which have a specific action upon the organs involved. If it is inflammation of the bronchia or lungs, as in bronchitis or pneumonia, lobelin and sanguinaria are almost specifics to stimulate and unload their diseased and congested vessels. One or two grains of triturated lobelin should be given every hour or two until it is no longer indicated. In all cases, the heat and dryness of the skin should be moderated by aconite, gelsemin or veratrum and baths. Since the publication of the first edition of this work, lobelin as a specific remedy for pneumonia has been brought into notice. From the most extensive experience of many Eclectic physicians, it is proved to exert specific influence on the pulmonary capillaries, stimulating and relieving them of the condition which so uniformly exists in this disease. The method of using the lobelin, is to triturate one grain to ten drops of sugar, and give from one to two grains every two or three hours in alternation, with veratrum or aconite. A small dose of lobelin acts much more efficiently than a large one. Indeed, a large dose destroys the specific effect of the remedy. While lobelin thus exerts its specific influence upon the pulmonary capillaries, sanguinarin acts equally advantageously on the capillaries of the bronchia; hence when bronchitis is complicated with pneumonia, the lobelin should be alternated with sanguinarin. Or, if bronchitis exists as a separate disease, the sanguinarin should be given alone.

PLEURITIS OR PLEURISY.

The specific remedy in this disease is the asclepin, of which two or three grains of the triturated article should be given

every half hour, in alternation with aconite or gelsemin, until the specific effect is produced, which is an entire relief of the pleuritic inflammation and congestion. In pleurisy as well as in all other diseases of a local character, the specific remedy should be assisted in its action by auxiliary remedies, as hot packs, aconite, warm baths, hot foot baths, &c., &c.

D Y S E N T E R Y.

The specific remedy in this disease is the gelsemin. There is probably no remedy in the materia medica which possesses more of a specific influence over disease than the gelsemin does over dysentery. Such is its power over this disease, that scarcely any other remedy is indicated but the auxiliary treatment which is indicated in every disease. The method of using the gelsemin in dysentery, is to give one or two grain doses of the triturated article, to be repeated as indicated. The object in calling attention to these remedies in particular, is that some of them were omitted in the first edition of this work on account of their specific influence not having been sufficiently well attested.

There can be no doubt that an extensive field lies before us, in the study of specific medication. The practice of most physicians of compounding a great variety of drugs and administering them in this condition, has done very much to retard the progress of a correct knowledge of drug action upon the living organism. But, the time will come, when the specific influence of each drug will be known; and the improvement which the Eclectic profession have already made in this important branch of knowledge, will lead to the development of specific remedies for every disease, *cæteris paribus*.

PART III.

OBSTETRICS AND DISEASES OF WOMEN
AND CHILDREN.

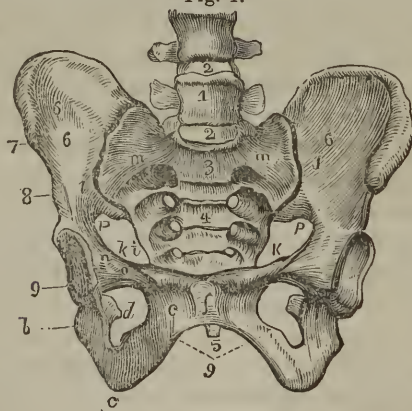
MIDWIFERY.

MIDWIFERY is the art of assisting women in child labour. And to do this properly, a knowledge of the reproductive organs is necessary.

THE PELVIS.

The pelvis is composed of the sacrum, coccyx, and two os innominata. Previous to puberty, the os innominata is composed of three parts which meet in the acetabulum. These are the ilium, ischium and pubis. The pelvis is a large bony basin at the base of the spinal column, and at the upper portion of the lower extremities. The os pubis is the anterior portion of the pelvis. The os coccyx is the back portion, and the hip bone or os innominata constitute the sides of the pelvis. See Fig. 1.

Fig. 1.



FEMALE PELVIS.

1. Last lumbar vertebra. 2 2. Intervertebral substance connecting the last lumbar vertebra with the fourth and sacrum. 3. Promontory of the sacrum. 4. Anterior surface of the sacrum, on which its transverse lines and foramina are seen. 5. Tip of the coccyx. 6 6. Iliac fossæ, forming the lateral boundary of the false pelvis. 7. Anterior superior spinous process of the ilium; right side. 8. Anterior inferior spinous process. 9. Acetabulum. *a*. Notch of the acetabulum. *b*. Body of the ischium. *c*. Its tuberosity. *d*. Spine of the ischium seen through the obturator foramen. *e*. Os pubis. *f*. Symphysis pubis. *g*. Arch of the pubes. *h*. Angle of the os pubis. *i*. Spine of the pubes; the prominent ridge between *h*. and *i*. is the crest of the pubes. *k k*. Pectineal line of the pubes. *l l*. Ilio-pectineal line. *m m*. The prolongation of this line to the promontory of the sacrum. The line represented by *h*, *i*, *k*, *k*, *l*, *l*, and *m*, *m*, is the brim of the true pelvis. *n*. Ilio-pectineal eminence. *o*. The smooth surface which supports the femoral vessels. *p p*. Great sacro-ischiatic notch.

THE PELVIC CAVITY.

The cavity of the pelvis contains the vagina, rectum, bladder, ovaries, uterus, and portions of the small intestines, besides a large number of vessels, nerves, &c. The female pelvis is divided into two portions, the upper and lower, or the superior and inferior. The division between the upper and lower portions of the pelvis is called the upper strait, or the *linea ilio-pectinea*. The inferior strait is the outlet of the pelvis.

Characteristics of the Female Pelvis.

“The pelvis of the female is less strong, less thick, and contains less osseous matter than that of the male. In the female the long diameter of the brim of the pelvis is from side to side; in the male it is from before backward; in the female the brim is more of an oval shape; in the male more

triangular; in the female the ilia are more distant; the tuberosities of the ischia are also more remote from each other, and from the os coccygis, and as these three points are further apart, the notches between them are consequently wider, and there is of necessity a considerably greater space between the os coccygis and pubes than in the male. The female sacrum is broader and less curved than in the other sex. The ligamentous cartilage at the symphysis pubis is broader and shorter. In consequence of the cavity of the pelvis being wider in women, the superior articulations of their thigh bones are further removed from each other, which circumstance occasions their peculiarity in walking. They seem to require a greater effort than men to preserve the centre of gravity when the leg is raised. The greater distance between the anterior and superior spinous processes of the ilia, necessarily increases the length of Poupart's ligaments, forming the crural arch; on which account less resistance being made to the abdominal viscera, females are more subject to femoral hernia than males. Sæmmering has remarked that the angle of union of the ossa pubis, is in the male from 60 to 80 degrees, whereas in the female it is 90 degrees.

External organs of generation.—1st. The *mons veneris* is a rounded prominence situated on the fore part of the pubis, and at the age of puberty it becomes covered with hair. 2d, The vulva, a longitudinal fissure extending from the lower portion of the pubis to within an inch of the anus. On each side of this fissure are two lips, the larger of which is called the *labia majora*, or great external lip, and the *labia minora* or internal lip, which is only brought into view by separating the external lip. The *clitoris* is a small red projection just below the pubis and between the two lips.

The urethra of the female is about one inch in length, more dilated than in the male, and passes directly under the pubis.

The vagina is directly below the urethra, and in the virgi-

nal state is partly closed by a thin mucous membrane called the *hymen*.

Internal Organs of Generation.—1st, The vagina. The vagina is a curved canal of from four to six inches long, and its usual diameter is about one inch, although it is capable of great distention.

2d, The uterus is a hollow organ situated at the upper portion of the vagina, and is pyriform in shape.

After the female has borne children, the shape of the uterus is somewhat changed, as may be noticed by the following figures.

Fig. 2 shows the appearance of the uterus before impregnation, and Fig. 3 afterwards.

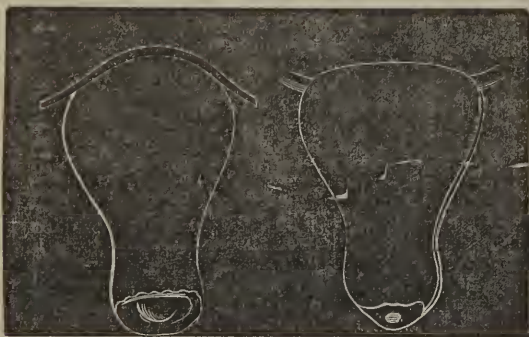


Fig. 3.

Fig. 2.

The uterus is divided into the fundus which comprises all portions of the uterus above the Fallopian tubes and cervix or neck, which includes the lower portion and body, which comprises the parts between the two. Fig. 4 represents the uterus, the broad ligament on each side, with the two ovaries just in front, and the Fallopian tubes just above, and their fimbriated ends near the outer border of the ovaries.

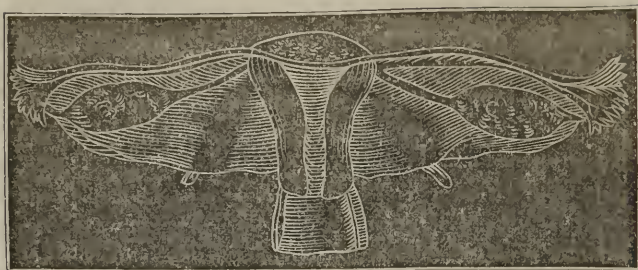


Fig. 4.

3d, Fallopian Tubes.—The Fallopian tubes are two canals about four inches in length, extending from the upper portion of the uterine cavity to the sides of the pelvis, and serve to carry the semen from the uterus to the ovaries. The fimbriated ends of these tubes hang loose over the ovaries, and during the act of copulation they seize upon the ovum, and thus make the communication between the vagina and ovaries complete.

OVARIES.

The ovaries are two small bodies about one inch in length, and are contained within the broad ligaments, as shown in fig. 4, in the wings on each side of the uterus. The ovaries become enlarged at puberty, and much diminished after the turn of life.

The ovaries contain the ova or egg, which during copulation becomes absorbed by the fimbriated ends of the Fallopian tubes, and are conveyed into the uterus.

GENERATION.

By generation is understood reproduction of the species. Reproduction of the human species may be said to consist, 1st, of copulation, which is the sexual union under the influence of instinctive passion, 2d, vivification of the ovum, which is the result of a prolific copulation, 3d, gestation, which includes the entire period from the commencement of

conception to the commencement of parturition, 4th; parturition including the period from the commencement of labour until the fœtus and secundines are expelled into the world. The theories of conception are somewhat various, and as yet it appears that the precise manner in which the ovum becomes impregnated, is a matter of speculation. Yet the following facts have been so uniformly observed to exist as conditions of generation, that they may be said to constitute the more essential points upon this subject.

They are as follows: The female furnishes the germ egg or ovule which exists in vast numbers in the ovarium. They mature at certain periods, absorb and escape from the natural covering, and come in contact with the seminal fluid at some point either in the uterus, Fallopian tubes or ovaries. This union of the seminal fluid and ovum results in the vitalization of the latter and ultimate development of the human fœtus, which will partake of the constitutional character of the parents.

MENSTRUATION.

Menstruation usually commences at the age of puberty, which is announced by enlargement of the mammæ, the development of the pelvis, &c. Menstruation consists in sanguineous discharges from the uterine system, with the Graafian vesicle and its ova, through the Fallopian tubes into the uterus, followed by disengagement of the congested uterine capillaries and the mingling of the exudate blood with the mucus of the uterus and vagina. Much speculation exists relative to the cause of this periodical discharge of the Graafian vesicle and the corresponding congestion of the ovaries and uterus, together with the accompanying menstrual flow. But the probability is that in the majority of cases a lack of vitalization of the ova prevents the organization of the exudate fluid, which escapes from the uterine capillaries. The result is that disintegration and retrogressive metamorphosis produce irritation and contraction of the uterine fibres, and

an expulsion of the contents of the uterus. "The period of life at which the catamenia first make their appearance is not the same in all countries. The observations of Drs. Guy, Roberton, &c., show, that in England and Scotland, the greatest number of females begin to menstruate at fifteen years of age, while some few begin to menstruate as early as the eleventh, and others as late as the nineteenth year. In France and Germany, nearly the same results have been arrived at. Dr. Roberton states that, in Hindostan the catamenia make their first appearance between the twelfth and thirteenth year. In the United States, most females begin to menstruate at the age of fourteen or sixteen.

In every country, curious cases of precocious and tardy menstruations have been recorded. Haller mentions one, where the female menstruated at the ninth year. Others have been reported as occurring at some time between the first and seventh year. The most curious, is that recorded by Velpeau, in which a child, from Havana, began to menstruate regularly at eighteen months of age. In this case, Velpeau adds, that there was a development of the other signs of puberty. In the fourth vol. of the *Med. Chir. Trans. of London*, there is a case reported in which menstruation commenced regularly at birth. At the age of four years, the child died, and upon examination the uterus was found unusually developed; the state of the ovaries unfortunately is not mentioned. In these cases of precocious menstruation, Raciborski thinks that the Graafian vesicles are fully developed, and the catamenial flow is only the necessary consequence of the periodical maturation of the ova.

The symptoms of these conditions of the uterus are slightly febrile and nervous disturbance, pain in the lumbar region, and in some cases nausea and vomiting. But when the female is healthy, the constitutional disturbances are very slight.

TREATMENT.

The treatment during menstruation is more hygienic than

medicinal. Exposure to cold currents of air should be avoided, the bowels should be kept regular, with neutralizing mixture, and if there are indications of unnatural uterine congestion, a warm sitz bath at night, and a warm wet girdle applied around the lower portion of the abdomen, will be found of much service.

PAINFUL MENSTRUATION.

Painful menstruation is usually caused by an irritated or congested condition of the cervix uteri, together with disease of the vagina.

SYMPTOMS.

The patient usually feels more or less heaviness in the lower portion of the abdomen, irregular pain in the back, there is less of appetite, pain in the head, and in some cases rigors and chills. These symptoms will be of a longer or shorter duration, when regular uterine pains will be felt very much like those of early labour, followed by the menstrual flow. In some cases the pain and constitutional symptoms will disappear in the course of a few hours, while in others they will continue through the entire period of menstruation.

In some cases, instead of the above symptoms, great nervous irritability will be manifested, and there will be regular attacks of hysteria. In these cases the hands and feet will be cold, the bowels costive, respiration imperfect, and the lungs will become filled with carbonic acid gas, which will be expelled in paroxysms.

TREATMENT.

As soon as the symptoms manifest themselves, give the patient a hot foot and sitz bath, and apply hot mustard pastes to the breasts, followed by a warm mush poultice. Place the patient in bed, and give the following compound:—Ten grains of senecin, twenty grains of bebeerine, and one grain of gelsemin. Mix. Divide into six powders, and give one

every two hours, until all the unnatural symptoms disappear. If this should not relieve, a hot pack should be applied to the lower portion of the abdomen.

After the catamenial flow has ceased, to prevent a return of the pain during the next period, give the following compound:—Super-carbonate of iron one half ounce, hamamelin one drachm, English chamomile one ounce. Triturate the hamamelin and iron, and add all to one quart of good port wine, and take one tablespoonful three times a day. Use cold water twice a day by means of a female syringe; watch the regular period and attend to the premonitory symptoms as directed above.

PROFUSE MENSTRUATION, OR MENORRHAGIA.

This may be an excessive quantity of the menstrual flow or the too frequent recurrence of the catamenia. The quantity of the menstrual flow depends very much upon the habits and constitution of the patient, the climate, &c. Hence what would be a normal menstruation for one person, would amount to menorrhagia in another. Therefore, the only method of diagnosis is, to compare one period with another, and ascertain what the natural quantity should be.

CAUSES.

Abortion, excessive veneria, ascarides in the rectum, wearing tight clothing about the waist, so as to obstruct the return of the venous blood from the extremities, also bad air and excesses of every variety, are liable to result in menorrhagia, by producing excessive uterine and ovarian congestion.

SYMPTOMS.

The most prominent symptom is, the excessive menstrual discharge. There is also pallor and general debility, pain in the back and sides, with palpitation of the heart, dizziness, irregular bowels, and in some cases inflammation of the larynx

and bronchia. If the disease occurs in a scrofulous person and is allowed to continue, the lungs soon become involved, tuberculous deposits occur, and the patient dies of pulmonary consumption.

TREATMENT.

Before commencing medication in this disease, the cause should be ascertained and removed. During the menstruation, from ten to twenty drops of the oil of erigeron should be taken three or four times a day until the discharge is reduced to its normal quantity. At the same time the patient should take one half grain of aletrin and two or three grains of carbonate of iron, in one tablespoonful of good port wine three times a day.

Between the periods of menstruation, the patient should take a cold sitz bath once or twice a day, and as often use cold water female injections; also take the following tonic bitters:—Take queen of the meadow or eupatorin purpurin two ounces, cornus florida or dogwood blossoms one ounce, precipitate carbonate of iron two drachms. Pulverize. Mix, and add to one quart of good port wine, and take one wine glassful three times a day. The bowels should be kept open by small doses of neutralizing mixture and leptandrin or eunymmin, and the bitters may be alternated with the following pill:—

R. Vallet's ferruginous mass..... gr. xxx.
 Bebeerine..... gr. xx.
 Macrotin..... gr. xj.

Mix: form a pill, and let one be taken three times a day. The diet should consist of fruits and vegetables, and out-door exercise should be freely taken, accompanied by regular habits.

PREGNANCY.

When conception has taken place, the ovum is conveyed through the Fallopian tube to the cavity of the uterus, and utero-gestation is said to commence. In some instances

the ovum, after impregnation, is retained in the ovary or Fallopian tube, and ovarian or Fallopian pregnancy occurs. False pregnancy occurs when a false germ, a mole, or hydatids exist in the uterus.

SIGNS OF PREGNANCY.

One of the first and surest signs of pregnancy, is a cessation of the catamenia. This is not, however, an unerring sign, as it may cease from other causes. Nor is the presence of the menses a sure sign of non-pregnancy, as it is a well known fact, that some females menstruate during the early months of pregnancy, and that others never menstruate except during pregnancy. Hence, any one of these signs alone may not be reliable. But when the following series of symptoms exist, we need not be mistaken in diagnosis. During the first and second months, there is tumefaction and tenderness of the breasts, unnatural flatness of the lower portion of the bowels, nausea, and sometimes vomiting in the morning, and suppression of the menses. By examination per vaginam, the uterus will be found slightly prolapsed, the os uteri closed, and the cervix directed towards the symphysis pubis. From the third to the eighth month, in addition to the above symptoms, the tumefaction of the breasts will be increased, the areola will be discoloured, and in many cases a secretion of the milk will take place. There will be movement of the foetus, foetal pulsation, and increase of the abdominal tumour.

TREATMENT.

The only early symptom of pregnancy which requires treatment, is the morning sickness. For this, either of the following remedies may be relied on. Take from twenty to thirty drops of pepsine every morning before rising, or from three to fifteen grains of triturated senecin once or twice a day. During the latter stages of pregnancy, if there is weakness, the patient should take one teaspoonful of the mother's

cordial two or three times a day. If there is pain with tendency to abort, one or two grains of triturated helonine with two or three grains of triturated hyosciamin, should be taken at bed-time. The bowels should be kept open by mild laxatives, and violent exercise should be avoided.

CHILD BIRTH, OR PARTURITION.

If the fortieth week of pregnancy occurs at the regular time of the catamenial flow, labour will commence; but if it does not correspond with that time, labour will be delayed until the next regular period of menstruation. In some cases labour may be anticipated, and occur as soon as the thirty-eighth or thirty-ninth week.

CAUSES OF PARTURITION.

The cause of the expulsion of the fœtus is the involuntary contraction of the uterus, aided by the abdominal muscles. To render the combined action of the two classes of muscles complete, the lungs, by a deep inspiration, are filled with air, which is prevented from escaping by contraction of the glottis. At the same time the ribs are fixed, and the diaphragm is in a rigid state. As soon as the abdominal muscles contract, the intestines are thrown up against the diaphragm, and the entire force of the contraction is made upon the gravid uterus, and its contents are expelled as soon as the os uteri becomes sufficiently dilated. The pain experienced by the patient is caused by the pressure which the uterine nerve receives during the contraction of the uterine fibres. Hence, as soon as the fibres relax, the pain ceases. As the uterine contraction is periodical, it follows that the pain is also intermittent. The first pains are mostly transitory, occurring at regular intervals, and are designed merely to dilate the os uteri, which is in a rigid state during the first stage of labour. The rapidity with which the mouth of the uterus dilates, depends altogether upon the degree of

muscular rigidity, and the frequency and violence of the uterine pains. In primiparæ, or females who have never borne children, the dilatation is usually more tedious than in those who have previously borne children.

SIGNS OF APPROACHING LABOUR.

A few days previous to labour, the uterus will be observed to settle into the pelvic cavity, the stomach will become relieved by the removal of the mechanical pressure, and the patient will feel every way very much better;—to use her own words, she feels so much better that she expects to be sick in a few days. This immunity from nearly all the inconveniences of uterine gestation appears to be a wise provision on the part of the Creator to enable the recuperative powers of the system to prepare themselves to aid the patient to endure the labour and pain which is always, to a greater or less extent, the accompaniments of this event. As labour is about to commence, the patient has a frequent desire to evacuate the bladder and the rectum. At this time there is usually a discharge from the vagina of a mucous character, not unfrequently tinged with blood, and sometimes actual hemorrhage occurs. Accompanying this discharge are slight premonitory pains, usually very transitory and fugitive. As regular labour approaches, the pains increase in frequency, and instead of commencing in the lower portion of the abdomen, as they do during the dilatation of the os uteri, they commence in the back, and pass forward and downward, occurring at regular intervals, and are of a regular periodical character. It is under these pains that the os uteri becomes fully dilated, and if it is very rigid, the pains are tedious and extremely hard to bear.

The patient often is apprehensive of danger, and especially if she has not confidence in her medical attendant. Her nervous system becomes affected, thereby protracting the first stage of labour. When the os uteri is fully dilated the

first stage of labour is said to be over, and the second stage commences. In the early part of this stage the membrane which contains the liquor amnii ruptures, and the liquor escapes. At this time the labour becomes more severe. The abdominal muscles contributing much to the expulsion of the fœtus, and being under the influence of the will, the patient and attendants often think that by a bearing-down effort of the patient the fœtus will be more readily expelled. This is true, provided the mouth of the uterus is thoroughly dilated—otherwise the effect of abdominal pressure might be to rupture the uterus, and produce serious consequences. If the mouth of the uterus be well dilated, the patient should be instructed to hold her breath, as long as convenient, to assist in fixing the abdominal muscles, thereby aiding the expulsion of the fœtus. At the same time she may very much facilitate the effort by placing her feet against some hard and firm substance, and pulling with the hands at some permanent object. Much injury may be done at this stage of labour by too violent extension; therefore extreme caution should be observed in every effort made by the patient to aid nature in effecting delivery. In some cases gentle pressure upon the abdomen will assist in fixing the abdominal muscles so as to aid labour. The patient should also be instructed to bear the pains with calmness, avoiding nervous or mental agitation, keeping as quiet as possible, although there is no objection to her standing upon her feet, walking about the room, or using the vessel to evacuate the bowels and bladder, until after the head of the child passes the pelvis, and presses against the perineum and vulva, at which time the patient should remain quiet, although the pressure against the bladder and rectum frequently produces an evacuation of these organs. During the passage of the fœtus through the os uteri and vagina to the inferior strait of the pelvis, the pains are most excruciating, and the patient often gives vent to her feelings in the most pitiful groans and cries. As soon

as the head reaches the lower strait of the pelvis, and pressure is made upon the perineum, the agony and anxiety of the patient are extreme.

The attendant should place a napkin firmly against the perineum, making pressure whenever the pains occur, so as to prevent its rupturing. Also direct the head of the fœtus through the vulva with the other hand. As soon as the head emerges from the vulva there will be a short repose, during which the attendant should carefully examine the neck of the child, and ascertain whether the umbilicus is around it, and if so, remove it. The child's head should also be supported,—but in no case in natural labour should traction be made until a pain appears. Then a gentle rotary traction may be made on the child's head, to assist the uterus in the expulsion of the body. During the progress of the first stage of labour the attendant will have occasion to make examinations to ascertain the position of the child, the character of the presentation, the advancement of labour, &c., which should be done by feeling, as gently as possible, with the finger covered with oil or glycerine for the fontanelle, as described under the head of different presentations. In no case, however, is it justifiable, on the part of the attendant to repeat these examinations oftener than is absolutely necessary to ascertain the position of the fœtus, as no good, but much injury may result from the constant manipulation, sometimes practised by obstetricians. The position of the patient during labour should be governed by circumstances. Some patients find the easiest position in bed reclining upon the left side—others can only endure the pains by being on their knees; others by walking about the room until the pains return, and then kneeling upon a cushioned chair until they pass off, resuming the exercise until another return. In each of these positions I have seen patients complete their labour with equal facility—hence the attendant should be governed by circumstances in respect to the position of the patient.

With reference to the duration of labour, the attendant should be careful not to make the time too short, as thereby the patient and her friends will be likely to apprehend that something is wrong, and their confidence in him will be lost.

The following facts will be a guide to the length of time that must elapse from the commencement of labour until delivery is effected :

Where the pelvis is large, labour is more rapid than if it be small : and the first labour is usually more protracted than subsequent ones. The more relaxed the soft parts, the more rapid the labour. Also where the mouth of the uterus is soft and easily dilated, labour usually progresses more rapidly than where it is thin and tense. If the pains are regular and at short intervals, with a well dilated vagina, labour will usually be short ; on the other hand, where the os is firm, the vagina unyielding, and the pains irregular, the labour will be more protracted and tedious. The different presentations of the child's head to the pelvis, also have much to do with the period of labour. These are the cephalic and pelvic presentations. The cephalic positions include the presentation of the face and vertex and the shoulder, while the pelvic includes the knees, feet and breech. When the vertex or head is presented, the labour is said to be natural, and all other presentations are said to be abnormal.

The first three positions of the vertex or head are represented by the following Figures :

Fig. 5 represents the first position.



Fig. 5.

POSITIONS OF THE HEAD.

The head presentation is characterized by the following six positions:

1st. Where the posterior fontanelle points to the left acetabulum of the mother. The posterior fontanelle is that part where the two sides or parietes, and back or occipital bones unite just back of the crown of the head, and may be recognised by the touch, the bones not being quite united, and the corners of the bones being easily felt. The

Fig. 6 represents the second position.



Fig. 6.

acetabulum is the socket in which the head of the thigh bone plays. The 2d position, is where the posterior fontanelle looks towards the right acetabulum. The 3d is where the posterior fontanelle looks to the symphysis pubis. The 4th is where the anterior fontanelle presents to the left acetabulum. The 5th is where the anterior fontanelle looks towards the right acetabulum. The 6th is where the anterior fontanelle will be found to the symphysis pubis. The anterior fontanelle is that place in the anterior of the head where the

Fig. 7 represents the third position.



Fig. 7.

frontal and parietal bones unite, and is known as the open place in the child's head.

THE DIAGNOSIS OF HEAD PRESENTATIONS.

The diagnosis is usually easy, especially after labour commences. By examination per vaginam, a round, hard and unceased body will be felt; and, if pressed backwards, a large groove will be felt traversing the head, nearly from one end to the other. This is the sagittal suture. At one end of this suture is the posterior fontanelle, and at the other is the anterior fontanelle, which may be distinguished by the posterior being three-cornered and the anterior nearly square. These fontanelles, as I have already remarked, are sure to indicate the position of the child's head during the second stage of labour. The fifth position, although more tedious than the

Fig. 8 represents the sixth position.



Fig. 8.

first, is by no means an uncommon one. The sixth position is one of the most difficult ones, as will be noticed, from the fact, that the largest diameter of the child's head presents itself to the smallest diameter of the pelvis.

In this presentation, an early attempt should be made to reduce the position to one of the easier ones. If this be not accomplished, the use of the instruments may be required.

THE DUTIES OF THE ACCOUCHEUR.

Having described the more essential points of what is termed natural labour, before giving a description of difficult parturition, I would offer a few remarks upon the duty of the attendant. When a physician is called to a case of labour, he should obey the summons as soon as possible. On his arrival, he should not enter the room until he has been announced. In the presence of the patient he should be modest and gentle, but should make such inquiries relative to the condition of the bowels, bladder, labour, &c., as will enable him to obtain all the requisite information respecting the condition of the patient. If the bowels are costive, they should be evacuated by means of a warm water injection. If necessary, the bladder should be evacuated by means of a catheter. If a vaginal examination should be necessary, the fact should be made known to a third person, who will inform the patient. The hand should be softened by warm water and oiled with sweet oil, and the examination should never be carried further than is absolutely necessary to obtain proper information as to the nature of the presentation. If every thing is found as it should be, and the pains are regular, the patient should be allowed to progress without interruption, save an occasional examination to ascertain when the labour will be complete. On the contrary, if the pains are tedious and the os is rigid, from three to ten drops of the tincture of gelsemin should be given in connexion with five or ten grains of the triturated caulophyllin every half hour, until the pains are regulated and the rigidity of the os overcome. If these remedies do not regulate the pains, the feet should be placed in warm water and the patient be allowed to drink a strong infusion of cotton root. Or, in the absence of that, a few doses of senecin and quinine may be given.

R. Senecin, gr. x.
 Sulph. quinine, gr. v.
 Sac. alba, gr. xx.

Mix : divide into ten powders, and give one every fifteen minutes until the pains become regular. If hemorrhage should occur, from five to ten drops of the oil of erigeron every ten or fifteen minutes will usually be sufficient to check it. If not, five or ten grains of capsicum given in connexion with it, will control it. If the warm water injection should not move the bowels, a teaspoonful of fluid extract anti-bilious physic may be given. When the child is born, it should be carefully examined to see if the bones are broken, or if any thing is wrong. During the entire course, the attendant should be calm and courteous, and do all in his power to contribute to the wants of the patient.

TYING THE CORD.

As soon as the child is delivered, a ligature should be placed around the cord, about one inch above the navel, sufficiently tight to prevent circulation in the cord, which may be known by its ceasing to pulsate. A second ligature should be placed about one inch above the first, and as soon as the pulsation in the cord ceases, it may be divided with a sharp pair of scissors, and the child given over to an attendant.

DELIVERY OF THE PLACENTA.

After the delivery of the fœtus, the pains usually cease for ten or fifteen minutes, and then returning, are followed by an expulsion of the secundines. To facilitate the expulsion of the placenta, the attendant should make gentle friction with the hand over the abdomen, at the same time making slight traction upon the cord. There should be no pulling upon the cord, however, as it might cause inversion of the uterus, or the uterus might be dragged into the lower portion of the pelvic cavity. The former would be fatal to life, and the latter to health. If the placenta is not immediately expelled, and the pains do not return, let the patient rest for a few hours. The practice of forcing it away, is a pernicious one, as no harm can

arise by allowing it to remain for a few hours. In cases where the placenta has been attached to the uterus, I have allowed it to remain two, and in one case four days, without any mischievous result. On the contrary, it became detached, and was expelled without artificial means. Should the pains not return, however, and it is thought advisable to resort to means to expel the placenta, it can easily be accomplished by applying hot packs to the breast, and giving an infusion of blue cohosh or a few doses of caulophyllin, repeated at intervals of ten or fifteen minutes, aided by friction over the abdomen. If the placenta should be attached, the hand may be introduced into the vagina, and by introducing one finger into the uterus, cause it to relinquish its adhesive attachments. The expulsion may be assisted by gently pulling upon the cord, at the same time moving it to the right and left, and up and down in the vagina. After the placenta is expelled, several oiled napkins should be folded and applied to the vulva. The thighs should be brought into proximity, and an abdominal bandage of some ten or twelve inches in width, fastened tightly around the body, the wet clothing removed, and the patient placed comfortably in bed.

After Pains.—When after pains occur, small doses of hyoscyamin and gelsemin will soon relieve them. But, as these pains are for the purpose of expelling from the uterus effete matter, which, if allowed to remain, would be likely to produce puerperal fever, it is not best to interrupt them unless they prove too exhausting to the patient.

Lochia.—The lochia, is a discharge from the uterus after delivery, and is caused by the escape of bloody serum from the partially open mouths of the uterine blood vessels. It usually continues from five to ten days.

Treatment.—Where the lochia is in excess and produces debility, a few doses of the oil of erigeron may be used in

connexion with hamamelin, bebeerine and precip. carb. of iron.

R. Hamamelin,.....	gr. vj.
Bebeerine,.....	gr. x.
Precip. carb. of iron,	gr. x.
Sac. alba,	gr. xxx.

Triturate: mix, divide into ten powders, and give one every three hours.

If the lochia be suppressed or scanty, a free purge of popdophyllin and cream of tartar should be given, followed by iron and quinine, or by senecin and quinine. If this should not produce a return of the lochia, a warm mush-poultice should be applied to the breasts, a hot pack to the bowels, and a strong infusion of the cotton-root, given in connexion with the quinine and senecin. The diet, during the first fifteen or twenty days, should be nutritious and easy of digestion, and the patient should avoid violent exercise and exposure to inclement weather.

MANAGEMENT OF THE CHILD.

Previous to washing the child, it should be anointed with lard or soft oil. After washing with soap and water, the dressing of the navel should be attended to. The attached portion of the umbilical cord should be passed through a hole cut in the centre of several folds of linen, which should envelop the cord in such a manner as to prevent its coming in contact with the bowels. An abdominal bandage should be applied, but not so tight as to prevent free circulation; and the child should be dressed in warm flannels. The child's mouth should be washed with cold water, and applied to the mother's breast,—as the first secretion of the breast will move its bowels. If it be necessary to give the child nourishment before the secretion of milk occurs in the breast, it should be fed with milk and water sweetened.

PRESENTATIONS OF THE FACE.

The face presentations may be divided into four positions: 1st. Where the chin points to the right side, and the back of the child to the left side of the mother. This position may be ascertained after the water breaks, by feeling for the coronal suture, the orbital process of the eyes, the nose, mouth, chin, and, sometimes, the ears. The great utility of a correct diagnosis in these cases, is to ascertain the position of the feet—a matter of prime importance when it becomes necessary to turn the child. The 2d face presentation is, where the face presents to the left side. The 3d is, where the face presents to the sacrum. The 4th, the chin presents to the pubis. In all cases of face presentation, the natural tendency of labour is to rotate the head towards the symphysis pubis. When nature fails to do this, art should render all the assistance in its power. When the uterus is well relaxed, the hand may be introduced, and the vertex pressed downwards, and the face pressed gradually backwards and forwards, thus reducing the face presentation to a natural head presentation. This expedient, however, should be resorted to with great precaution, and not until nature has entirely failed to accomplish her purpose.

In some of these cases, labour becomes very much protracted, and instruments must be resorted to,—but not until every effort has been made, on the part of the attendant, to effect a natural delivery. The system should be well supported with tonics,—as *caulophyllin*, *bebecrine*, hot ginger tea, warm sitz baths, and an anti-spasmodic injection.

PRETERNATURAL PRESENTATION.

BREECH, FEET, AND KNEES PRESENTATION.

These forms of presentation are next in frequency to that of the vertex. In nearly all of these cases, nature is able to accomplish the labour without interference.

Diagnosis of Breech Presentation.—When the finger is introduced into the os uteri, it will come in contact with a soft, round tumour, on the side of which may be felt one of the trochanters. If the fingers be passed between these prominences on the upper portion of the thigh-bone, the anus and organ of generation will be felt. When the feet present, there is no difficulty in detecting them; but when the knees present themselves, all the different points of the head should be studied by the sense of touch. The breech presentations may assume four positions,—1st. The right sacro-iliac; 2d. The left sacro-iliac; 3d. The sacro-pubic; 4th. The sacro-sacral. The great importance of these positions are to enable us to study the positions of the head as it enters the pelvis, as in all cases where the greater diameter of the head comes in contact with the lesser diameter of the pelvis, very much difficulty may be expected to exist. It is in these cases, that instrumental interference so frequently becomes necessary. The feet presentation may also occur in four different ways, possessing many practical points of interest, tending the same as breech presentations, to indicate the degree of the severity of labour.

COMPOUND PRESENTATIONS.

A compound presentation is where one of the extremities present, in connexion with the head. Very fortunately these presentations occur where the pelvis is large,—hence, the delivery may be effected without the interference of instruments. In these cases, the arm or foot should be pushed back into the uterus in the absence of pain. In some instances, to effect this operation, it will be necessary to introduce the hand into the vagina, and, in some cases, into the uterus, returning the limb to its original position, and causing it to remain until the head is so far advanced, as to prevent its return. But in cases where the limb is so far advanced, and the condition of the fœtus is such as to pre-

clude the possibility of returning, the attendant should wait until he is satisfied that nature will not accomplish her purposes, and then resort to medical or mechanical interference as he deems expedient.

These means, consisting in the use of ether and craniotomy, or of the forceps, all of which will be described under the head of Instrumental Labour.

SHOULDER PRESENTATIONS.

Diagnosis of shoulder presentation before rupture of the membrane, is exceedingly difficult. But afterwards, it may be determined by the finger coming in contact when introduced into the vagina with a tumour much smaller than the head—and instead of the fontanelles, the acromial process will be felt, and by proper care the finger may be carried into the axillary and down upon the ribs. The shoulder presentation may be distinguished from that of the elbow by the olecranon process and the two condyles of the elbow.

TREATMENT FOR SHOULDER PRESENTATION.

The rectum should be evacuated by warm water injections, and the bladder, if necessary, by a catheter. Much care should be taken not to rupture the membranes. When the os uteri is dilated to the size of a half dollar, and the vagina and soft parts become yielding, the patient should be placed upon her back across the bed, with her hips slightly elevated, and her feet should be supported by two assistants. The attendant's arm and hand should be well oiled, and he should take his seat between the patient's limbs. During a pain the hand should be gradually introduced into the vagina, and afterwards in the absence of pain into the uterine cavity. If introducing the hand into the uterine cavity should produce uterine contraction, the hand should be opened and made to cover the body of the child. The attendant should now rupture the membrane, and pass his hand over the um-

bilious, in the neighbourhood of which a foot will be found. If pain should come on during this manipulation, the hand should be opened and allowed to rest upon the child. After which the foot should be grasped between two fingers and search made for the other foot. If the other foot is found, it should be grasped: if not, gentle traction should be made upon the one already grasped, at the same time making gentle pressure upon the abdomen, until the feet are brought into the vagina. Should the pains be severe, a few drops of laudanum, or a dose of morphine should be given to arrest them. After the operation of turning is completed, the hand should be withdrawn, and labour allowed to pursue its natural course.

When the *liquor amnii* has been discharged, and there are violent pains, with a rigid uterus, no attempt should be made to introduce the hand, but the pain should be arrested by laudanum, the uterus dilated by the use of gelsemin, or lobelia injections, before turning is attempted. If, however, the uterine contraction should appear permanent, the attempt at turning abortive, the fœtus should be removed by ex-vivisection.

PROLAPSUS OF THE UMBILICAL CORD.

When the cord is prolapsed, or appears before the presentation of the fœtus, it should be carried back into the vagina, and, if practicable, into the uterus. If not, it should be so adjusted in the pelvic cavity as to prevent the pressure of the fœtus upon it, thereby stopping circulation and causing the death of the child.

INSTRUMENTAL LABOUR.

APPLICATION OF THE FORCEPS.

The object in applying the forceps is, first, to assist the uterus in the expulsion of the child; and secondly, to hasten delivery where there is threatened danger to the mother or

child, as in the case of active hemorrhage or convulsions; in the third place, to assist where there is malformation of the fœtus, deformities of the pelvis—in short, wherever there is any obstruction to the expulsion of the fœtus by the efforts of nature.

The forceps should not be used where the os uteri and surrounding soft parts remain in a rigid state, or where the cord is short, or where it is twisted around the neck. As a general rule, the forceps should not be used when the head has not escaped from the uterus.

In applying the forceps the following rules should be observed:

“1st. The patient should be placed upon her back, exactly in the position recommended for turning.”

“2d. The bladder and rectum should be emptied of their contents, the first by the catheter, if necessary, the second by means of an enema.”

“3d. Before using the instrument it will be proper to apprise the patient and her friends of the nature of the operation, of its probable success, and by showing her the instruments prove to her that they are not calculated, when properly used, to injure either her or the child.”

“4th. Examine the condition of the soft parts, which should be dilated or dilatable. At the same time the exact position of the presenting part should be ascertained if possible.”

“5th. The instruments should be warmed to the temperature of the patient. They should also be well greased.”

“6th. The forceps may be applied to the head where either the vertex or face presents, or where it remains in the pelvis after the body is expelled. By some it has been recommended to apply them over the iliac bones in case of breech presentations; but this is doubtful practice, since the form of the part and the delicacy of these bones so early in life would hardly afford sufficient grasp for the purpose of extraction.”

“7th. The concave surface of the blade of the forceps

should be applied, wherever it is practicable, to the sides of the head in such a way as to grasp it in a line nearly parallel with the occipito-mental diameter. This is not always practicable, for in some cases, as we shall see hereafter, we will be obliged to apply the forceps, so that the forehead and occiput shall be the points compressed."

"8th. The forceps should always be applied so as to bring at the termination of delivery, the concave edge under the symphysis pubis."

"9th. The posterior branch is generally the one to be first introduced."

"10th. The male branch or blade is to be held in the left hand, and is always to be applied to the left side of the pelvis. The reverse is true in regard to the female blade. The introduction of the blades should be effected during the absence of uterine pains."

"11th. The hand which is free is to be used as the director of the blade which is being introduced. When the presenting part is low down, the introduction of one or two fingers only will be required, care being taken to insinuate them between the head and circumference of the os uteri, so as to prevent the latter from being grasped under the blade of the forceps. When the presenting part is very elevated, it will be necessary to introduce the whole hand into the vagina, for the purpose of giving the proper direction to the blade of the instrument."

"12th. The blades should be introduced into the posterior part of the pelvis, when they may by a spiral movement be gradually drawn round so as to elapse the side of the head."

"13th. No force should be used in pushing the blades up to the proper point; if, as sometimes occurs, the soft parts of the mother, or the scalp or ear of the child, should prevent the proper application of the blades, the difficulty must be overcome by gentle manipulation, and not by force."

"14th. If when applied, the forceps should not lock easily, they should be withdrawn and reapplied."

"15th. Slight compression must be used, and traction should be made during the existence of uterine pain. The handles need not be tied, and the compression should be relaxed between each tractive effort."

"16th. Before using traction, we should be sure that no portion of the patient is within the grasp of the forceps. If any portion of the vagina vulva or uterus be included, the least compression will produce violent pain, and the cries of the patient will warn us of the accident."

"17th. Traction should always be made in the direction of the axis of that part of the curve (formed by the pelvis and perineum) at which the head is successively placed."

"18th. If pains continue until the head has nearly passed the external parts, our traction may be suspended, (though the forceps should not be removed,) so as to allow delivery to be accomplished by natural efforts if possible. In not removing the instruments, but merely suspending the traction, there will be no necessity for their re-application, if the natural expulsive efforts should cease before delivery has been effected."

"19th. The handle of the forceps must be seized with the right hand, and compressed sufficiently to give a firm hold upon the head, but where the pelvis is deformed a greater amount of compression will be required. The left hand must be applied over the joint or lock of the forceps. When all this has been arranged, traction may be commenced by gradually and to a moderate extent, swinging the handle from side to side, at the same time changing the direction of our efforts, as the head advances through the pelvis and over the perineum. As the head passes over the perineum, the latter should be carefully supported as in ordinary labours."

CRANIOTOMY.

This operation consists in opening the child's head and allowing the brain to escape, to admit of the delivery of the child. In no case is the attendant justifiable in resorting to this measure, unless the life of the mother or child must be sacrificed, in which case the mother should be saved. In order to perform this operation, the uterus should be much relaxed, and the perforator after being well oiled should be seized with the right hand and passed along the two fingers of the left, previously introduced to the point where the opening is to be made in the head.

The instrument is to be pushed into the head up to the shoulders, when they should be spread so as to make the opening as large as possible. When this is done, another incision should be made at right angles with the first, after which the instrument should be passed into the brain, and so far as possible break up the cerebral mass. After this the perforator should be withdrawn and the crochet introduced into the cranium, and its sharp points hooked into the internal tablet of the cranial bones. At the same time two fingers of the left hand should be introduced and placed in such a position as to detect any slip of the crochet, thereby preventing injury to the soft parts. Gentle traction may then be made upon the crochet, and the mutilated head thus expelled. In some cases it becomes necessary to remove these bones by piecemeal, either with the crochet or with a pair of craniotomy forceps.

PUERPERAL CONVULSIONS.

SYMPTOMS.

The symptoms of puerperal convulsions very closely resemble epilepsy, and are usually, though not always, preceded by more or less pulmonary symptoms; such as pain in the head, slight vertigo, and load and pressure about the epi-

gastrium, and in some cases nausea, and vomiting. Also numbness in the limbs and flashes of light before the eyes sometimes occur as premonitory symptoms of the above difficulty. In other cases no premonitory symptoms whatever occur, and the first thing observed is, that the patient's eyes are set and rolled upwards in the socket, with rigidity of the muscles, frothing at the mouth, protrusion of the tongue, &c. These symptoms frequently disappear in a few minutes, but sometimes they continue for an hour or more. When these convulsions appear, they are very apt to be repeated until the cause is removed.

CAUSES.

The causes of puerperal convulsions are various. But the more common cause is pressure of the fœtus on the sacral plexus nerves during parturition, or an injury inflicted resulting in convulsions after child-birth. Another cause is congestion of the capillaries of the brain during labour. They may also be caused by irritation or pressure of the uterine or vaginal nerves, injuries and congestion of the spine, &c.

TREATMENT.

If the convulsions are caused by pressure upon the sacral nerves, the head of the fœtus should be at once elevated. In the absence of proper instruments, the head of a large spoon may be used for this purpose, placing it under the child's head, and elevating it until it passes the lower strait of the pelvis. If this cannot be done, the child should be delivered at once by means of the forceps. At the same time, give the patient eight or ten of the intermittent drops, until the paroxysms are subdued. If the convulsions are caused by irritation of the vagina or uterine nerves, gelsemin and hyoscyamin are the remedies. If caused by congestion of the brain, the ligature should be applied to the arms and thighs; at the same time the tincture of veratrum viride should be given in five or ten drachm doses every fifteen or

twenty minutes until the paroxysms are relieved. The after treatment should consist in the use of mild tonics, antispasmodics, hip baths, warm water injections, and a judicious regimen.

DISEASES OF THE FEMALE BREAST.

During and after pregnancy the mammary glands, which in the virgin state are small, soon become very much enlarged by the new movement of the system, which always exists in pregnancy. In some cases they become inflamed, and painful. This also occurs frequently previous to menstruation, and I have seen several cases of abscesses occurring in the breasts, both during the earlier stages of pregnancy and menstruation. Such is the relation between the breasts after puberty and the ovaries and uterus, that whatever effects or causes changes in one, causes more or less disturbance of function in the other.

INFLAMMATION AND ABSCESS OF THE BREASTS.

Inflammation of the breasts does not differ materially from inflammation of other tissues, save the more general influence upon the nervous system, owing to the extensive communication of the breasts with the great nervous centres. In inflammation of the breasts the capillaries become over-loaded, and the vessels being weak, the blood accumulates, until finally the inner coats become diseased, the blood stagnates, and actual inflammation is said to exist.

CONSTITUTIONAL SYMPTOMS.

The symptoms of inflammation of the breasts are shivering, pain in the head, loss of appetite, constipation, high coloured urine, and quick pulse.

The local symptoms are swelling, redness, and pain in the breasts. If the inflammation is allowed to continue, a deposit of sero-purulent fluid will occur in the cellular structure,

and by its constant pressure upon the adjacent tissue, becomes absorbed, and an abscess is formed, which sooner or later opens and discharges.

CAUSES.

The causes of inflammation of the breasts are various, such as cold during lactation or nursing, accumulation of milk in the breasts, injuries to them, diseases of the uterus, scrofulous diathesis, &c., &c.

TREATMENT.

The first thing to be attended to in the treatment of inflammation of the breasts, is to subdue local inflammation, and to remove constitutional symptoms. To do this, make the following local application. Take one ounce of arnica flowers, one half ounce of lobelia leaves, and two ounces of hops. Make a strong decoction, and apply cloths wrung from it hot as the patient can bear. Repeat this operation every fifteen or twenty minutes until the swelling disappears. At the same time add ten drops of aconite to one half tumbler of water, and give the patient one teaspoonful every half hour, to keep the skin moist. If there is constipation, from one half to one grain of podophyllin, and one drachm of cream of tartar, may be given to open the bowels. If there is debility, or if the patient is of a scrofulous diathesis, the cathartic should be followed by quinine and precip. carb. of iron, and general tonics, such as chamomile, Indian hemp, pipsisseway, and precipitate of iron, made into bitters by adding wine, or one half wine-glassful of Beach's wine bitters, may be given three times a day. If in spite of all efforts, suppuration should take place, the breast should be opened, and the following poultice applied. Take pulverized slippery elm, pulverized hemlock bark, and pulverized arnica flowers, equal parts, put them in warm soda water, and apply to the breast warm, and change as occasion requires.

If inflammation of the breast occurs after child-birth, the following lotion is almost a specific.

R. Camphor gum, ʒss.
 Table salt, ʒj.
 Good whisky, Oj.

Beef's gall, one tea spoonful; mix, and apply to the breast as soon as the swelling and pain commences.

SORE NIPPLES.

One of the most troublesome and common difficulties connected with the breast after child-birth, is soreness of the nipples.

CAUSE.

The most common cause of this difficulty is a want of cleanliness on the part of the mother and child. The child is frequently applied to the breast before its mouth is thoroughly cleansed, and after nursing, the milk is too often allowed to coagulate and sour upon the nipple, thus proving a source of great irritation.

TREATMENT.

The treatment of sore nipples consists of washing with warm soap and water, after each nursing of the child, and sprinkling the nipple with superfine flower of hemlock bark.

The child's mouth should be washed before applying it to the breast.

If this treatment does not effect a cure, the following ointment should be used.

R. Balsam of fir, ʒj.
 White wax, ʒij.

Melt the wax and fir together, then add ten grains of equal parts of tannin and bayberry. Apply this ointment to the nipple as often as necessary, and wash previous to each application. In the absence of this ointment, the nipple may be bathed in an infusion of sumach and hemlock bark

Cover the nipple with folds of linen during the intervals of nursing. A wash of borax and sage has also been used for sore nipples to good advantage.

CAKED BREASTS.

In some cases where the lacteals or milk vessels are weak, or from other cause diseased, the milk accumulates in them, and produces what is known as milk cakes. When in addition to this, the patient takes cold, this congestion of the milk vessels produces, or is connected with serious constitutional disturbances, such as chills, fever, sweats, loss of appetite, &c.

TREATMENT.

Make two ounces of thick plaster of bees-wax and lard, adding ten grains of gelsemin.

Apply this plaster warm three or four times a day. If this does not give relief in a few days, the following liniment may be used.

R. Oil origanum,.....	ʒi.
Oil hemlock,.....	ʒij.
Alcohol,.....	ʒij.

Mix, and apply before applying the plaster. The stomach and bowels should be regulated, and the patient avoid exposure.

LEUCORRŒA.

CATARRH OF THE VAGINA, OR WHITES.

Catarrh of the vagina may be acute or chronic. It may depend upon some constitutional defect, as scrofula, or it may arise from some specific poison, as syphilis, or gonorrhœa. When it is dependent upon constitutional difficulties, the vagina is flabby, or pale, the mucous membrane is invested with a thick coating of grayish epithelium, mixed with mucus of nearly the same colour, and of the consistency of cream. Where there is marked constitutional cachexia, the amount secreted is considerable, and proves not

only very exhausting, but often causes local irritation, which is very annoying. When the catarrhal affection is caused by specific poison, as gonorrhœa, the parts become tumefied, red, and painful, and the discharge is of a deep yellow colour. In some rare cases, the discharge from the vagina, in ordinary catarrh, becomes organized, and presents all the appearances of pseudo-membranous formations in other parts, especially that which forms in the larynx, in croup.

CAUSES.

The causes of leucorrhœa are various, such as irritation of the vagina, resulting in hyperemia, excessive sexual indulgence, and by the habit of wearing tight clothing around the waist, thereby obstructing the return of venous blood to the heart, and causing an accumulation of blood in the uterus, vagina, &c.

TREATMENT.

The treatment of this disease depends much upon circumstances.

If there is a loaded condition of the uterine, and vaginal capillaries, the treatment referred to for congestion of the uterus, will be found valuable. If there is a weak state of the vessels, as in most cases of a chronic character, the vagina should be injected with an infusion of poplar bark, four or five times a day, and a pack over the abdomen secured by a bandage, passing around the body, and a strap around the thigh. At the same time, the patient should take a tablespoonful of a strong wine tincture of dogwood blossoms, three or four times a day, and one or two grains of bebeerine every night, on retiring. The above treatment may be alternated with the following.

R.—Hamamelin,..... gr. xx.
 Macrotin,..... gr. x.
 Precip. carb. iron, gr. xij.
 White sugar, ʒj.

Mix: triturate, and divide into xx powders, and take one three or four times a day. Also, let the patient take one or two cold sitz baths daily, and use cold water vaginal injection, or the following vaginal injection may be used.

Take pulverized Peruvian bark, and hemlock bark, equal parts. Make a strong infusion, and use it cold, three or four times a day. Also, wear a wet girdle around the lower portion of the abdomen, well protected with dry flannel.

URETHRITIS, OR INFLAMMATION OF THE URETHRA.

This disease is more common in the male than the female, although it occasionally occurs in the latter. It may appear either in an acute or chronic form. It is usually accompanied with a disposition to urinate frequently, and with a smarting or burning sensation. In some cases the urine is passed with much difficulty; in others, the inflammation is so great, that it cannot be passed at all.

The urethra will be found painful upon pressure, and if the inflammation is of a chronic character, a muco-purulent mucus or purulent discharge will occur from the urethra.

CAUSES.

Many causes contribute to inflammation of the urethra. It may occur as the effect of some specific poison, as gonorrhœa. It may also arise from gravelly deposits in the bladder, from ascarides in the rectum, from excess of uric and other acids in the urine, and in females from injuries during parturition.

TREATMENT.

The treatment of this disease depends much upon the cause. When it arises as the result of a specific poison, as from gonorrhœa, it should be treated as directed under that head. When from excess of acid in the urine, diuretics with alkalies should be used, as a tea of marshmallow, in which

is dissolved one or two grains of saleratus or soda. When from injuries received during parturition, a warm elm poultice should be applied, and aconite in connexion with sponge baths, should be used.

When the urine is retained, the bladder should be evacuated by means of a catheter. The stomach and bowels should be thoroughly cleansed by the use of mild lobelia emetics and purgatives, and the patient should remain in bed until the disease is entirely removed.

STRICTURE OF THE URETHRA.

Stricture of the urethra occasionally occurs in both sexes, but like inflammation, it occurs much more frequently in the male than the female. It is first observed by the urine passing in a small stream, accompanied by difficulty of micturation and pain. If the stricture is of recent date, it may usually be removed by introducing a bougie or catheter down to the point of stricture, and conveying through it a drop of oil of lobelia in a strong infusion of the gelsemium semper-virens, together with a constitutional treatment as indicated. By perseverance in this course, I have cured several cases of a very obstinate character. If this method should fail, the stricture may be dilated, by first introducing a small bougie and then a larger one; increasing the size every day or two, until the stricture is overcome.

In most cases of stricture occurring in the male, I have found a syrup to be valuable, made as follows:

Take equal parts of chimaphillin or pipsisseway and eupatorin purpurin, or queen of the meadow, adding a small amount of tincture of iodine, say one drachm to one pint of the syrup, and allow the patient to take one tablespoonful every three hours during the day. Also small doses of hydrastin, euonymin and gelsemin at night, say gelsemin one eighth of a grain; euonymin one grain; hydrastin two grains: mix, and take every evening.

IMPERFORATE HYMEN.

Where the hymen remains imperforate until the period of menstruation, its organization is sometimes so firm as to cause retention of that secretion in the upper part of the vagina; in which case, a hemispherical tumour, of a dark reddish colour, will be discovered between the labia. There will be weight and pain in the lower portion of the bowels, nausea, anorexia and febrile disturbance, and frequently much nervous irritation.

TREATMENT.

Means should at once be used to remove the obstruction. This can frequently be accomplished by gentle pressure. If that is not sufficient, an opening should be made with a trochar or sharp pointed bistoury, to allow the menses to escape. Much care should be observed not to injure the walls of the vagina. The constitutional symptoms should be treated and the patient kept quiet in bed until the catamenia cease.

OCCLUSION OF THE OS-UTERI.

This may occur as the result of disease, or it may be congenital.

SYMPTOMS.

When congenital, the menses will not make their appearance, but there will be more or less pain with tumefaction of the uterus. There will be general constitutional disturbance, as loss of appetite, headache and nervousness, pain in the loins, and if the pain is of long standing, œdema of the extremities with tendency to dropsy.

These symptoms will exist for a few days, and disappear in a measure until the next monthly period. Where closure of the os-uteri occurs as the result of disease, the menses will cease to flow, and a train of symptoms will manifest themselves similar to those named above.

TREATMENT.

An attempt should be made to open the os-uteri by introducing an ordinary sound. If this should not succeed, recourse should be had to the bistoury or trochar. The vagina should be dilated with a speculum until the os-uteri is brought to view, and the bistoury or trochar should be gently pressed through the adhesive structure into the uterus. After which, an ordinary catheter or silver tube should be introduced through the os into the uterus, and allowed to remain for several days, for the purpose of allowing the fluid to escape and to prevent the closure of the os. If inflammation should arise, cool mucilaginous vaginal injections should be used in connexion with a mild podophyllin and cream tartar purge, with aconite or veratrum to control the constitutional symptoms.

CONGESTION AND INFLAMMATION
OF THE CERVIX UTERI.

The cervix uteri constitutes the lower portion of the uterus, and is exceedingly liable to congestion and inflammation.

SYMPTOMS.

When the cervix uteri is congested, it will be tender to the touch and accompanied with much pain in menstruation. And if the congestion terminates in inflammation, the neck of the uterus when brought to view by the speculum, will appear very much swollen and of a bright red colour. The os will be dilated, and the patient will complain of much tenderness upon pressure. In some cases, the mucous membrane will be found ulcerated and covered with pus. If the inflammation is of long standing, it will extend to the sub-adjacent tissues, producing difficult and painful defecation, and micturation with imperfect menstruation, and serious constitutional disturbance.

TREATMENT.

In congestion of the cervix uteri, but little more is necessary than the frequent use of water by means of a female syringe, the use of sitz baths, wet bandages, and bebeerin and macrotin, as recommended under the head of uterine congestion. Where there is inflammation, a weak solution of nitrate of silver, applied to the parts by means of a probang through a glass speculum, followed by vaginal injections of slippery elm mucilage, a few days after which an injection of an infusion of Peruvian bark and hydrastis canadensis should be used. The abdomen should be thoroughly packed with cold packs every day, accompanied with one or two cool sitz baths. The bowels should be kept regular by means of neutralizing mixture and leptandrin, and the following powder should be given:

R. Gelsemin,	gr. ij.
Caulophyllin,	gr. x.
Hamamelin,	gr. xx.
Hypophosphite of soda,	gr. v.
Sacch. alba,	gr. xxx.

Mix: triturate, divide into fifteen powders. Dose, one four times a day.

After the inflammation is subdued, give a tonic as follows:

R. Chamomile flowers.
Eupatorin purpurin.
Caulophyllin thalyctroides, \bar{a} \bar{a} .
One half ounce.
Port wine one quart.

Mix: dose, one tablespoonful three times a day. During the administration of this medicine, the baths and injections should be continued, the diet well regulated, and the patient allowed to take free exercise in the open air.

RETROVERSION OF THE UTERUS.

Retroversion of the uterus consists in a displacement of the fundus uteri backward, the cervix being carried forward

against the bladder, the uterus assuming a transverse position.

CAUSES.

The causes of this form of uterine displacement, are a weakness of uterine organs, long continued distention of the bladder, abortions, chronic inflammation of the uterine organs, violent vomiting, &c., &c.

SYMPTOMS.

The most common symptoms of retroversion of the uterus, are such as exist in the early stages of pregnancy, viz., dyspepsia, dragging pains in the hip, neuralgia, hysteria, nervous debility, and if the disease should continue, bronchitis and consumption often follow. If retroversion occurs during early pregnancy, in addition to the above symptoms, there will be either partial or complete retention of the urine, and by manual examination a tumour will be felt, which is tender on pressure. Anterior to this tumour may be felt the cervix uteri.

TREATMENT.

One of the first things to be attended to in the treatment of this disease, is the replacement of the uterus. To do this make a gentle rotary motion with the hand upon the abdomen, and at the same time elevate the uterus and carry it back into its proper position, when the pad and bandage should be applied as directed in the treatment of prolapsus uteri. In connexion with these mechanical means, female injections composed of equal parts of a cold infusion of Peruvian bark and golden seal should be used frequently through the day.

The body should be frequently sponged in cold water, followed by brisk friction with the hand or towel, and the following tonic bitters should be administered. Take one pint of best port wine, one drachm of precipitate carbonate of iron, one half ounce of pulverized unicorn root, and one half ounce

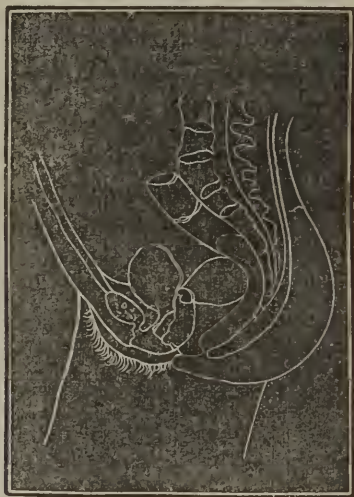
of life root. Mix, and allow the patient to take from a table-spoonful to one wine-glassful three times a day. Small doses of helonine and rhusin, or senecine in combination with pyrophosphate of iron, may be used with the bitters, or instead of the bitters.

ANTEVERSION OF THE UTERUS.

By anteversion of the uterus, is understood that condition in which the womb is so displaced that the fundus rests against the symphysis pubis, and the cervix against the rectum.

By reference to Fig. 9, it will be seen that the os uteri is turned upward and forward, resting against the bladder. In retroversion of the uterus the position is reverse.

Fig. 9.



ANTEVERSION OF THE UTERUS.

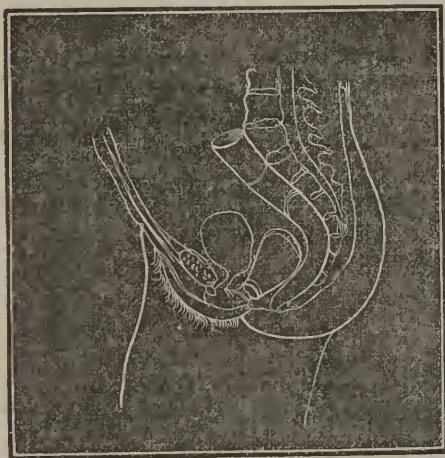
SYMPTOMS.

The symptoms of anteversion of the uterus, are almost precisely the same as those described under the head of re-

troversion of the uterus, and the only difference in the treatment, is in the manipulations to replace the uterus.

Fig. 10 shows the falling of the womb, pressing the bladder forward and upward, and pressing the rectum back against the bony structure, and the mouth of the uterus to the lower portion of the vagina.

Fig. 10.



TUMOURS AND MORBID GROWTHS IN THE VAGINA.

Fibroid and encysted tumours frequently make their appearance in the vagina. They are mostly formed in the cellular tissue, between the rectum and vagina.

They may be distinguished from vaginal hernia, by being more circumscribed and less liable to enlargement by the act of coughing.

A case occurred recently in my practice, where the vagina was nearly filled with hydatids or small encysted tumours of various sizes, of a yellowish appearance, and attached to the mucous membrane. They were easily removed by means of astringent washes.

Fibroid tumours seldom occur in the vagina. But when they do occur, they are mostly the result of syphilis.

TREATMENT.

Encysted tumours may be removed by passing a ligature around them, allowing them to slough off, or by an incision into the cyst, and evacuating the contents, followed by an injection of a strong infusion of bayberry bark. Fibroid tumours may be removed either by the ligature, knife, or caustics. After the removal, the parts should be dressed with mild zinc ointment, and astringent and antiseptic vaginal injections should be administered, and the patient should take the alterative syrup and iodide of potassium.

HYDATIDS OF THE UTERUS.

The formation of small cysts or bladders of water in the uterus, are by no means uncommon. They are mostly developed from the inner membrane, and vary in size from half a pea to a partridge's egg. They are usually oval, with a thin wall, opaque, and contain a thin pellucid fluid. They may be numerous or few in number. More frequently, however, they are in clusters, and numerous.

SYMPTOMS.

The symptoms of hydatids are frequently those of early pregnancy. Such as nausea, vomiting, enlargement of the uterus, fullness of the breasts, suppression of the menses, &c. In from two to five months the patient feels weight and uneasiness about the abdomen, which is usually followed by uterine pains, hemorrhage, and expulsion of the hydatids.

TREATMENT.

If the flooding is excessive, from five to ten drops of the oil of erigeron should be given, repeated every ten or fifteen minutes, until the hemorrhage is controlled. If the pain

should not be sufficient to expel the cysts, a warm infusion of equal parts of blue cohosh and cotton root, should be given in one or two ounce doses, every twenty or thirty minutes, until the uterus seems to be entirely evacuated. Or give the following compound.

R. Caulophyllin,.....gr. x.
 Gossypium,.....gr. xx.
 Sac. alba,.....gr. xxx.

M. Triturate and divide into five powders. Give one every ten or fifteen minutes until the hydatids are all expelled.

The patient should afterwards be treated with chalybeates and tonics.

NEURALGIA OF THE UTERUS.

By neuralgia of the uterus, is understood a sharp violent pain in that organ, usually occurring very suddenly; of a rheumatic character. It usually attacks girls shortly after puberty, and is dependent upon derangement of the uterine function.

SYMPTOMS.

The patient may be perfectly well apparently, and may be attacked with violent lancinating pain in the uterus, which usually lasts for a few minutes only, but soon returns, assuming a regular periodical character. In some cases it is connected with hysteria, the patient becoming excessively nervous, and the pain moves to different parts of the body.

TREATMENT.

A pill made in the following manner, is almost a specific in the above disease. Take the extract of garden lettuce, thirty grains; gelsemin, one and a half grains; dioscorin, ten grains. Mix, and form ten pills, and give one every hour until the pain subsides.

To prevent a return of these attacks, one or two moderate doses of quinine and prussiate of iron should be given two or three times a day, for eight or ten days.

PROLAPSUS UTERI.

This subject has already been discussed under the head of congestion of the uterus. Hence, I would only add, that in the treatment of this disease, a most valuable remedy is the hamamelin in connexion with Indian hemp or *asclepias incarnata*. Take from five to ten grains of the triturated hamamelin in one half teaspoonful of infusion of the *asclepias incarnata*, four or five times a day. This remedy, in connexion with those recommended under the head of uterine congestion, is exceedingly valuable.

PROLAPSUS OF THE VAGINA.

Vaginal Cystocele and Rectocele.

By vaginal cystocele, is understood a falling or prolapsus of the anterior portion of the bladder and vagina.

By vaginal rectocele, is meant a prolapsus of the back portion of the vagina and the rectum. These two forms of vaginal disease may occur separately, or they may occur together.

CAUSES.

The causes of prolapsus of the vagina, are various; such as *excessive veneria*, self-pollution, child-bearing, bad management during and after labour, and the habit of wearing heavy skirts around the waist, which drag the uterus, bladder and bowels into the lower portion of the pelvis.

SYMPTOMS.

The patient complains of weight and pressure in the lower portion of the abdomen, with a constant desire to urinate, and in some cases great difficulty in micturation, in bad cases amounting almost to dysuria. Where the back portion of the vagina is prolapsed, in addition to the above symptoms,

there will be tenesmus, with a constant inclination to evacuate the bowels. The stomach will be disturbed, and in the majority of cases where the symptoms continue for any length of time, the nervous system will be exhausted. The patient complains of restlessness, headache, palpitation, leucorrhœa, dyspepsia, languor, and a peculiar weak and exhausted feeling of the whole body, and especially of the stomach and bowels.

TREATMENT.

The treatment of prolapsus of the vagina should be commenced by sponging the parts thoroughly with soft tepid water. After which, by gentle manipulations, restore the part as far as practicable to the original position. Then apply a large wet pack, and secure it to the parts by a bandage passed around the body and thighs. The bowels should be opened by small doses of neutralizing mixture and euonymin. The vagina should be injected with an infusion of equal parts of Peruvian bark and hydrastis. Or if the vaginal glands are diseased, apply a weak solution of iodide of potassa, and an infusion of *comptonia asplenifolia*, or *sweet fern*. If the urine is retained in the bladder, it should be evacuated with a catheter. Uterine tonics and chalybeates should be administered as follows. Take unicorn root, *aletris farinosa*, *comptonia asplenifolia*, or *sweet fern*, of each one ounce, port wine one quart, precipitate carbonate of iron, one drachm. Mix, and take one teaspoonful three times a day.

Also take lupulin, gr. xx.

Hamamelin, gr. x.

Pyro-phosphate of iron, gr. x.

Mix, divide into ten powders, and take one every morning and evening. If the patient's digestive powers are feeble, the compound syrup of hypophosphites should be taken instead of the wine bitters. The skin should be kept well cleansed by the frequent use of baths, and accompanied by friction. Sitz baths should be used daily, and the patient

should be caused to take free exercise in the open air. The diet should be of easy digestion and nutritious.

PUERPERAL FEVER.

This is a very fatal disease which frequently follows parturition. In certain seasons and districts it prevails as an epidemic, and is very fatal in its effects. During certain seasons and particular localities it is so uniformly prevalent and fatal that many physicians suppose it to be carried by the attendant from one patient to another.

The most minute examinations into the cause and nature of this disease have not been able to detect any condition or symptom that is not occasionally found in cases of malignant inflammation of the uterus, peritoneum, and other internal organs. The disease then being of a malignant form the question arises, what are the causes of the disease, and why does it prevail as an epidemic?

Having had large opportunities to make observations, I have to my own satisfaction ascertained what many writers deem mysterious, viz., the cause of puerperal fever.

CAUSE.

So far as my own observations have extended, and so far as I have been able to learn from others, child-bed fever in nearly every case attacks persons who are of a scorbutic habit, or in other words, those who have been deprived of a sufficient quantity or quality of succulent vegetables, for the lack of which, the blood has become vitiated, and the entire system exhibits that condition which is known as land scurvy or purpura, in all cases of which this condition of the system exists. The gums become spongy, the digestion impaired, bowels irregular, urine scanty and high coloured, &c. This condition of the system not only manifests itself in feeble vital and physical forces, but this crasial state of the blood produces in the venous capillaries a species of capillary phlebitis, or a diseased condition of the minute venous vessels.

During labour this vitiated and impoverished blood is forced into the minute vessels of the uterus and peritoneum, and occasionally into other organs. The result is that they have no power to unload themselves when labour is over, nor has the uterus power to expel or throw off the effete matter remaining in it. After the expulsion of the fœtus and secundines, a rapid disorganization of the congested vessels occurs, and mortification and death follow. That this scorbutic condition of the system exists previously to, and at the same time that the epidemic of child-bed fever prevails, only requires observation to confirm. That child-bed fever will not occur if this purpurial condition be removed previous to child-birth can be shown by the most ample testimony. This hemorrhagic or purpuric condition may be removed by a free use of fresh vegetables, fruits, tonics, chalybeates, pure air, baths, &c.

SYMPTOMS.

The symptoms of child-bed fever are somewhat various, as the disease manifests nearly every degree of intensity, from a very mild sporadic form, to the most severe epidemic form of the disease.

The usual symptoms are weight and soreness in the lower part of the abdomen, accompanied by lassitude and debility, capricious appetite, imperfect lochia, spongy condition of the gums, constipated state of the bowels, and scanty and high coloured urine. These symptoms will usually continue for two or three days after delivery, when the patient will be seized with chills and rigors which may be so slight as scarcely to be observed by the patient, or they may be so severe as to amount to a regular ague shake. These rigors and chills are soon followed by a hot and pungent condition of the skin, pain in the head, loss of appetite, nausea, and in some cases vomiting. The pulse becomes hard and quick, respiration hurried and irregular, the secretions are arrested, the urine is scanty and high coloured, the tongue is clammy and co-

vered with a white coat, and in the course of a few hours the pain becomes concentrated in the lower portion of the abdomen, and is very severe. The bowels are tympanated, or bloated, and very tender, and the discharge of the lochia and the secretion of milk are suppressed. In some cases the mind becomes affected, and often there is delirium. Especially is this the case in the latter stage of the disease. If the disease is allowed to continue, symptoms of great prostration manifest themselves, and in the course of a few days mortification and death close the scene. In other cases inflammation assumes more of a chronic form, resulting in effusion into the abdominal cavity, and terminates as described in another part of this work under the head of empyema.

TREATMENT.

The most salutary treatment during the first stage of this disease is to give a free podophyllin and cream of tartar purge, followed by aconite or veratrum to control the fever. In the selection of the fever remedy, the attendant should be governed by circumstances. If the fever is of a high grade, and the patient of a full plethoric habit, veratrum is the remedy; but if the vital powers are feeble, and the fever of an adynamic type, use aconite. In connexion with the above remedy, hot packs should be applied to the bowels, and the vagina should be frequently injected with warm slippery elm emulsions by means of a female syringe. If the lochia is scanty or suppressed, a warm mustard poultice should be applied to the breast followed by hot packs covered with oiled silk or flannel. As soon as the bowels are evacuated and the other conditions have been attended to, the patient should take quinine and muriate tincture of iron—from three to five grains of quinine every two or three hours, alternated with from ten to twenty drops of muriate tincture of iron. The quinine and iron should be continued for twenty or thirty hours, and then omitted for a short time, to be repeated in a

few days, unless the symptoms become very much mitigated. During the treatment, the patient should be allowed lemon juice, fresh fruits and vegetable soups. Where there is tendency to gangrene, in addition to the quinine and iron, one or two grains of baptisin in a tablespoonful of wine and yeast may be given three or four times a day, also charcoal and yeast poultices should be applied to the bowels.

If the mustard poultice and hot packs applied to the breast do not produce a return of the lochia, one or two grains of senecine and a wine glass full of strong infusion of cotton root should be given, two or three times a day. If there is extensive fetid discharge following the use of these remedies, as there frequently is where the uterine capillaries are very much diseased, the powers of the uterus should be supported by bebecrine, macrotin, and phosphate of iron. If there is violent pain and nervous prostration, lupulin and gelsemin are the remedies. As already stated, where the disease proves obstinate, the quinine and iron should be repeated. The bowels should be kept regular and the skin should be thoroughly cleansed from day to day with soda water. The above treatment, together with such other remedies as may be indicated by the complication of the disease, has been most triumphantly successful when all other remedies have failed. Although I have treated a large number of cases of both the sporadic and epidemic forms of the disease, yet I have not lost a case, nor have I ever known the treatment to fail in the hands of others when properly applied.

ABORTION.

Abortion (*abortio*) signifies the expulsion of the fœtus from the uterus, before it is sufficiently developed to maintain independent life. When the product of conception is expelled between this period and the full period of pregnancy, it is called premature labour. The causes of abortion may be either natural or violent. Among the most prevalent causes,

are mercury, bleeding, constitutional syphilis, either in father or mother, small-pox, sudden and violent excitement of the blood vessels by surprise, anger, &c. Abortion may also be caused by disease or death of the embryo, by disease of the secundines, or by direct violence to the abdomen, &c., &c. In addition to these causes, there is a variety of medicines used by professional abortionists, such as spurred rye, turpentine, oil of tansy, savin, &c. Mechanical means are also resorted to for the purpose of rupturing the membranes. These means are mostly used to produce criminal abortion, and are not only disgraceful to persons employing them, but criminal in the eye of the law of our country, and of God. What is termed the normal cause of abortion is by no means unfrequent in this result. Dr. Whitehead, in his treatise upon this subject, states that in 2000 cases, one in seven terminated in abortion.

SYMPTOMS.

When abortion occurs in the early stage, the patient feels languid, uneasy, and despondent, and is troubled with chills, alternated with flashes of heat, there is nausea, palpitation, pain in the back, and tenderness over the abdomen. The breasts become flaccid, and there is more or less hemorrhage. In the more advanced stage, the pains are more severe, and frequently the hemorrhage is violent, so much so that in many cases, unless proper remedial agents be employed, the life of the patient is jeopardized.

TREATMENT.

Females who are predisposed to abortion, should carefully avoid every variety of active purgative, and all diuretic medicine, also violent exercise, and should take one or two cold sitz baths every morning on rising, followed by brisk friction, with a crash towel : also take one tablespoonful of the mother's cordial three times a day. Or if the cordial is not at hand,

take five or ten grains of triturated aletrin, and one or two grains of triturated bebeerine instead. The patient will also find much relief by placing a wet pack over the lower portion of the abdomen, securing it firmly by a bandage, passed around the body. Pains may frequently be arrested by giving one or two grains of the triturated hyosciamin, every two hours, alternated with hamamelin. To check hemorrhage, give five or ten drops of the oil of erigeron, or flea-bane, every ten or fifteen minutes until it is arrested. If this should not accomplish the desired effect, give five or ten grains of capsicum, in connexion with one or two grains of matico. If, in spite of all these remedies and such other means as the judgment of the attendant may devise, the tendency to abort is still persistent, and the indication is that the ovum is detached from the uterus, the patient should drink a strong decoction of cotton root, (*gossypium herbaceum*,) every fifteen or twenty minutes, until the foetus is expelled. Or if this should fail, the feet should be placed in warm water, and a warm mustard poultice should be applied to the breasts. After bathing the feet, the patient should take a warm sitz bath, and drink freely of warm pennyroyal tea, in connexion with the cotton root. At the same time, the oil of erigeron should be given to control the hemorrhage. After the foetus is expelled, much care should be observed, until the placenta is removed. If this should not occur in a few days, the treatment should be the same as for the expulsion of the foetus, using the same remedies to arrest the hemorrhage. During convalescence, the bowels should be kept regular, and small doses of precipitate of iron in connexion with bebeerine and rhusin should be given to maintain the patient's strength, and to prevent uterine weakness, which so frequently results from this cause.

PART IV.

SURGERY.

To describe all the diseases and operations generally included in this department of medicine, would require more space than the limits of this part of the work will allow. Our observations will therefore be confined to such surgical diseases and operations as we deem of most importance to the medical student, and the non-medical reader.

INFLAMMATION.

One of the first and most important diseases treated of under the head of practical surgery, is inflammation. As I have already given some of the more important facts relative to inflammation and its treatment on p. 72, it will only be necessary in this place to allude to it as it is modified by diseases of a surgical character.

Inflammation in surgery as in practice, may be said to be of different kinds, as *phlegmonous*, or inflammation in the deep or sub-cellular tissue; *erysipelatous*, when it is violent, and tends to a rapid disintegration of the tissue involved by it; *gangrenous*, when it is accompanied with gangrene, and serofulous, when the lymphatics are essentially involved. It has also been divided by some writers into venereal, gouty, cancerous, &c., &c.

The causes of inflammation may be divided into predisposing and exciting. There is a vast difference in the predisposition of different individuals to inflammation. This may be observed in families as well as individuals, and may depend upon the habits, diet, &c. Also persons who live in

cities are more liable to inflammation than those who live in the country. "Local inflammations are always more or less liable to produce a disturbance of the system, which is called *fever*, and this fever assumes characters peculiar to the kind of inflammation which excites it; in their general symptoms, surgical fevers resemble certain medical fevers, but they have always peculiarities of their own sufficiently well marked; we have fevers in surgery of the continued, remittent, and intermittent types, but when considering the particular cases in which one or other of those kinds is met, we shall find there are essential points of difference between them, and a corresponding one in a purely medical fever." I shall confine my remarks on inflammatory, or as it is sometimes called symptomatic or sympathetic fever. It is ushered in with a rigor, this succeeded by a general sensation of heat, and this again by sweating; there is headache, thirst, constipation, and a full pulse. While the fever lasts, all the secretions, morbid as well as natural, are diminished; if a patient has a gonorrhœa or gleet, or a running sore on his leg, or an issue in his arm, they will all dry up on the accession of inflammatory fever, from any cause; the thirst, diminished secretion of urine, and of the mucous membrane of the bowels, the dry tongue, &c., may all be explained by this one fact.

This is the sort of fever met in phlegmonous inflammation in a healthy constitution, and our treatment should be directed simultaneously to it, and to the local affection. Now, the occurrence of this fever, and its severity, depend very much on the constitution of the patient, although it is necessarily dependent on inflammation as an exciting cause; yet the presence of this cause does not always call it into action, as in slight and trivial cases, in a person of good habit. When the local inflammation is reduced, the fever will subside, and its departure is often marked by what is called a critical symptom, such as sweating or diarrhœa, &c., leaving no trace

behind, except a little debility. But this is not always so, for the inflammatory fever sometimes gives place to, or merges into a fever of another kind, apparently owing to a new turn in the inflammation itself; these changes in the local disease, are called, rather loosely, *terminations of inflammation*. The most favourable and common termination of inflammation, is by what is called *resolution*—that is, where on its departure it leaves the part just as it was before it was attacked. But it may end in *suppuration*, or by *adhesion* or *gangrene*.

TREATMENT.

Where local inflammation produces general fever, the body should be frequently sponged in warm tepid water. The bowels should be opened by anti-bilious physic, or podophyllin, and if the patient is of a full habit, he should take tinct. veratrum viride in two or three drop doses, every half hour, until the fever subsides. If the system be feeble, aconite should be used instead of the veratrum. Either cold or hot packs should be applied to the local disease. In the choice of the packs I am governed by the condition of the system. If the system is vigorous, and the patient of full habit, I use cold packing, but if the system is feeble, warm packs. When the inflammation has strong tendency to terminate in abscess, and it is not desirable to prevent it, warm slippery elm poultices may be used instead of packs. If it be desirable to prevent the formation of pus, the parts may be frequently bathed in a strong solution of sulphate of zinc, arnica, or lobelia tincture.

The frequent application of whisky and water will often serve to prevent suppuration. If there is tendency to mortification, baptisin, quinine, and capsicum, should be used internally, and charcoal, yeast and pyroligneous acid should be used externally in the form of poultices, and the strength of the patient should be well supported by the use of a liberal diet, and in some cases wine.

ABSCESS.

The term Abscess, (from *abscedo*,) denotes, that parts which were in contact, have become separated; and, in pathology, implies a collection of pus in any tissue of the body. Abscesses are divided by surgeons into eight varieties, viz.: acute and chronic, hot and cold, lymphatic, diffused, metastatic, and puerperal. They are formed by the secretion of purulent matter from inflamed capillaries, confined by a wall formed by the effusion of coagulated lymph which consolidates the surrounding tissues, and prevents a diffusion of pus.

SYMPTOMS.

In acute or phlegmonous abscess, the part will be inflamed and swollen, with a throbbing, pulsating pain: as the pus accumulates and approaches the surface, the part becomes soft and fluctuating. As the abscess advances, some portion of the swelled surface becomes more prominent, and more or less livid. In the majority of cases, supuration takes place,—giving exit to the hitherto confined pus. In rare cases, the swelling disappears by the pus becoming absorbed.

Chronic abscesses are formed by some gland or some portion of the subcutaneous cellular tissue becoming irritated, and frequently with not very prominent constitutional symptoms—except swelling. They soften and discharge a curdy, puriform fluid, or they frequently extend along some fascia, or burrow deep into the adjacent tissue, and remain a long time without opening. The cold or lymphatic abscess mostly occurs in persons of a scrofulous habit, and appears in the iliac, fauces, groin, or axilla. The patient usually feels but little uneasiness, and does not suffer much pain, but suddenly finds a large fluctuating tumour in some of the parts mentioned above, which, in some cases, opens, but more frequently remains indolent, and manifests but little disposition to suppurate. If opened, it will be found to contain a large quantity of thin, unhealthy pus.

A diffused or puerperal abscess occurs mostly in women, after confinement, in various parts of the body,—commonly in connexion with phlebitis, or inflammation of the veins. They may be from a pin's head, in size, to an abscess capable of holding a pint or more of pus. These abscesses may form in any part of the body, but are most numerous where there is the greatest number of absorbent glands. The pus formed in these abscesses is liable to gravitate and accumulate in the more dependent portions of the body, producing disturbance of the circulation, &c.

TREATMENT.

The indication to be fulfilled in the treatment of abscess, is to prevent the formation of pus—to evacuate the pus when formed, and to heal the parts, so as to prevent further secretion of pus. To prevent the formation of pus, all irritating substances should be removed, such as pieces of dead bone, &c.; cold packs should be applied, with alkaline baths, to the surface, followed by brisk friction.

The bowels should be moved freely by a purge of anti-bilious physic, and cream of tartar, or podophyllin; tonic and alterative syrups should be given, and there should be a free use of diuretics, such as marsh-mallow, clivers, eupatorin purpurin, &c. If, notwithstanding these means, it is evident that pus is about to form, the treatment should be changed.

Warm flax-seed or elm poultices, wet with the tincture of arnica or lobelia, should be applied to the part, and changed frequently. The patient should take of equal parts of the syrup of chimaphilin and balmony, one tablespoonful four or five times a day—also, small doses of precipitate carbonate of iron and lupulin, three or four times a day. The surface should be frequently sponged in warm lye-water, and the diet should be nutritious and easily digested.

When pointing occurs, the pus should be discharged.

There are three ways by which this may be accomplished, viz.: by incision, by tapping with the trochar, by making an aperture in the cyst with caustic. In acute abscess, the incision is preferable. It should be made either at the point where fluctuation is most distinct, or at the most dependent position of the abscess. It should be made by passing a sharp-pointed bistoury or lancet into the tumour a sufficient depth to reach the pus. After the abscess is evacuated, it should be injected with warm soap-suds, followed by a strong solution of myrrh and tincture of arnica.

In chronic abscess, the opening should be made by means of caustic potassa. Should the bone be diseased, the abscess should be injected with a strong solution of phosphate of lime, alternated with sulphate of iron, and sulphate of zinc. The patient should take phosphate of iron, chloride of soda, and quinine. If the abscess occurs in the extremities, and is connected with a scrofulous diathesis, the part should be supported by a bandage, frequently wet with a strong solution of salt and water, and the system should be well supported by tonics and antiseptics.

A valuable syrup in these cases, may be made as follows: Take chimaphilin umbellata, and pipsissewa, two ounces; chamomile flowers, one ounce; rock-rose, two ounces.

Make one pint of syrup,—add ten drops hydrocyanic acid.

Dose—one tablespoonful, three times a day.

CASUALTIES.

Life, when, to all appearance, lost, may often, by due care and energetic attention, be restored.

Accidents frequently prove fatal, merely because proper means are not used to counteract their effects. No person should be regarded as killed by accident or injury, unless some vital organ or structure be injured to such an extent as to be incompatible with life. The vital organs may be so

diseased as to very much disturb their functions, or, for the time, to entirely suspend them—yet, in many cases, by proper means, these functions may again be restored, and the life of the patient saved. Hence, in all cases where the faintest hope of life remains, every means should be used to restore it.

APNŒA, OR ASPHYXIA.

Apnœa, or asphyxia, is caused by a stoppage of circulation through the pulmonary capillaries. The more common causes of this affection are the inhalation of carbonic acid gas, the immersion of the body under water, or drowning, the inhalation of chloroform,—in short all non-oxygenized substances which will not support combustion, will cause asphyxia. It may also be produced by large doses of opium, and other narcotics, by pressure on the brain, injuries of the spine, extreme cold, frights, convulsions, and, in fact, any thing which may interrupt the circulation of blood through the heart and lungs.

TREATMENT.

The treatment of asphyxia depends much upon the cause, which should be removed, so far as possible. At the same time, the body should be kept warm by means of hot flannel, friction, &c.; and the bowels should be injected with warm water, and artificial respiration produced and continued so long as the slightest prospect of resuscitation remains.

Artificial respiration may be produced by applying the mouth to one nostril, while the other is closed, at the same time making pressure on the thyroid cartilage backwards and downward, so as to close the œsophagus and allow the atmospheric air to penetrate the bronchia and lungs. As soon as the lungs are filled, gentle pressure should be made upon the sides, until the air is expelled. Hot mustard pastes should be applied to the spine, and the patient ex-

posed to a current of pure air. In case of asphyxia from drowning, Dr. Marshall Hall's method is as follows:

"1st. Treat the patient instantly on the spot; in the open air, freely exposing the face, neck, and chest to the breeze—except in severe weather.

"2d. In order to clear the throat, place the patient gently on the face, with one wrist under the forehead, that all fluid and the tongue itself, may fall forward and leave the entrance into the windpipe free.

"3d. To excite respiration, turn the patient slightly on his side, and apply some irritating or stimulating agent to the nostrils, as veratrin, dilute ammonia, etc.

"4th. Make the face warm by brisk friction, then dash cold water upon it.

"5th. If not successful, lose no time, but, to imitate respiration, place the patient on his face, and turn the body gently but completely on the side, and a little beyond, then, again, on the face, and so on alternately. Repeat these movements deliberately and perseveringly fifteen times only in a minute. (When the patient lies on the thorax, this cavity is compressed by the weight of the body, and expiration takes place. When he is turned on the side, this pressure is removed, and inspiration occurs.)

"6th. When the prone position is resumed, make a uniform and efficient pressure along the spine, removing the pressure immediately before rotation on the side. (The pressure augments the expiration; the rotation commences inspiration.) Continue these measures.

"7th. Rub the limbs upward with firm pressure and with energy. (The object being to aid the return of venous blood to the heart.)

"8th. Substitute for the patient's wet clothing, if possible, such other covering as can be instantly procured—each by-stander supplying a coat or cloak, etc. Meantime, and

from time to time, to excite inspiration, let the surface of the body be slapped briskly with the hand.

"9th. Rub the body briskly till it is dry and warm, then dash cold water upon it and repeat the rubbing."

"If the weather be very cold, and the situation exposed, it will be obvious that throughout these measures a tolerable shelter should, if possible, be secured, and in extremely cold weather, it may be necessary to perform the rubbing and rotating movements with the body loosely covered with dry blankets, coats, or something of the kind."

Avoid the immediate removal of the patient, as it involves a dangerous loss of time—also, the use of bellows, or any forcing instrument,—also the warm bath and all rough treatment.

FOR STILL-BORN CHILDREN.

"Excite the skin. Use the cold (60°) and hot (100°) bath alternately in connexion with the above, postural respiration, rubbing upwards with pressure, etc."

CANCERS, OR MALIGNANT TUMOURS.

Cancer usually presents itself in four or five varieties; each variety possessing characteristics peculiar to itself, viz., scirrhus or hard cancer, encephaloid or soft cancer, colloid or gelatinous cancer, melanosis or black cancer.

The scirrhus variety is hard, firm, and transparent, and of a grayish colour. The encephaloid is brain-like, in its appearance, and is of a soft and hemorrhagic character. The colloid resembles glue, or honey in the comb. The melanosis is of a black colour, and is sometimes soft, and at others hard. Another variety of cancer is mentioned by some authors, called epithelial cancer.

These various forms may exist separately, or one variety may be associated with, or take the place of another. Thus encephaloid may take the place of scirrhus, or encephaloid, melanosis, scirrhus, and colloid may exist, in the same tu-

mour. The microscopic character of all these different varieties is essentially the same.

They all yield, by pressure, a turbid fluid, called cancer-juice, in which are granule cells, pigmentary and fatty matter. The cancer cells are spherical, fusiform, and spindle-shaped, elliptical or cunate, having two or three terminations.

The crasis, or condition of the blood which exists in cancer, consists in the preponderance of albumen, and an excess of fat. And it is evident that the development of cancer is owing to perverted nutrition, and that the healthy blastema as it escapes from the capillaries, by some local influence, instead of forming healthy tissue, contributes to the development of this unhealthy product.

The cause of this perverted cell-growth is doubtless the result of an injury inflicted upon the part where the future cancer makes its appearance. This injury may be mild, pressure producing a deformity of the healthy cell, which deformity is transmitted to the nuclei, and to all the cells that are developed from it. Thus, a series of irregular cell developments, results in that heterologous tissue, known as cancer. The injury inflicted may be violent, producing speedy irregular cell development, or it may be gradual, and the cell-growth only approximating to that abnormal structure, which by degrees assumes a real malignant character. All the facts yet observed relative to the nature and history of this disease warrant this explanation; as all cases of primary cancer occur on such organs as are liable to such injuries, besides, in a large majority of cases, the cancer development may be traced directly to this cause.

Also, the unsuccessful treatment of cancers by the use of the knife, and the successful treatment, by a long continued course of sloughing and caustic applications, most conclusively proves that, so long as one single, irregular, or nu-

cleated cancer cell remains, so long will the cancer development continue.

In order, however, that these cells may contribute to the development of this disease, the deformity or cancerous cell-growth must occur at the same time that the peculiar cancer cell-growth exists. Secondary cancers may be developed by the absorption of these cells, and their transmission through the lymphatics and blood vessels, to the organs and tissues, far from the primitive development. Thus, cancer of the lungs, &c., may be developed from cancer cells, formed in the breast or face, &c. Cancers most common, are 1. the face; 2. the stomach; 3. large intestines; 4. retro-peritoneal cancer in front of the spinal column; 5. hepatic; 6. bone cancer; 7. cancer of the skin and lips; 8. brain; 9. globe of the eye; 10. testes; 11. ovaries; 12. kidneys; 13. tongue; 14. œsophagus; 15. salivary glands and parotids.

SYMPTOMS.

A small hard tumour most frequently in the breast is the first indication of scirrhus cancer. It is at first movable and unattached to the integument, but eventually forms deep and superficial attachments. It grows slowly—is irregular in shape, and painful. The pain is mostly sharp, and lancinating, and is much increased on pressure.

In the course of time, the tumour absorbs the tissue beneath the skin, and becomes attached to it, which presents a bluish nodulated appearance. Ulceration usually takes place by the skin becoming absorbed. As the sloughing proceeds the edges become ragged and everted, having a bluish purple colour. The ulcer discharges a fetid sanious pus.

Encephaloid or soft cancer is more frequently met with in the globe of the eye, testes, nares, &c. It commences as a soft elastic lobulated tumour, having a semi-fluctuating feel. The skin covering it is loose, and covered with large dilated veins. It attaches itself to the integument, and ulceration occurs.

In some cases a mass of fungous flesh called fungus hæmatodes is thrown up from the tumour, which bleeds profusely. The lymphatic system soon becomes involved, and general constitutional disturbance is always an early symptom in this form of cancer.

Colloid or gelatinous cancer usually occurs in the internal viscera, although it occasionally occurs in the superficial tissues. It consists of cysts filled with a gelatinous semi-transparent fluid. Melanosis or black cancer occurs in the form of dark pigmentary matter, mostly upon the serous membranes. When ulceration occurs, a dark sanious matter is discharged.

TREATMENT.

The treatment of cancer is both constitutional and local. In the incipient stage it consists in radical extirpation of the diseased mass, either with the knife or caustics, and the sloughing process. For the purpose of removing the tumour, apply an ointment made as follows: Take the expressed juice of fresh pokeweed or *phytolacca decandra*, *rumex crispus* or yellow dock, and blood root or *sanguinaria canadensis*, equal parts. Evaporate the juice by means of a sand bath to the consistency of tar. Remove the cuticle over the tumour by means of blister plaster, and apply the ointment, renewing the application two or three times a day, washing the part each time with the best French brandy. This should be continued until the eschar involves the entire tumour, when a poultice should be applied, made in the following manner: Take pulverized indigo weed, or baptisin tinctoria, Peruvian bark, and slippery elm, equal parts, moisten with brewer's yeast, and apply, changing several times a day, until the dead mass is entirely sloughed out, washing with the brandy before each application. If there is appearance of any portion of the cancerous tumour remaining, renew the application of the ointment, washing with brandy, and followed by the poultice. During the local treatment, the pa-

tient should abstain from the use of fats and animal albumen, the diet consisting mostly of nutritious vegetables, fruits, &c.

The surface should be freely bathed daily, and the patient allowed free exercise in the open air. When the cancer tumour is entirely removed, a mild sloughing of the parts should be produced by the use of the following ointment. Take sulphate of zinc, one ounce, balsam of fir, five ounces, white wax, one ounce. Melt the wax and balsam together, and while cooling, add the zinc finely pulverized, also, add thirty drops of creasote. Apply the zinc in connexion with brandy, washing in quantity and frequency, sufficient to keep up a mild discharge, until every vestige of unhealthy growth disappears. In ordinary scirrhus cancer, if removed before suppuration occurs, it will usually suffice to continue the zinc ointment, for two or three weeks. In cases of open cancer, where the cancer cells may have been absorbed, and passed into the blood, in addition to the above local treatment, a thorough course of constitutional medication will be required, consisting mostly of tonics and antiseptics, tonics for the purpose of maintaining the integrity of the constitution, and antiseptics and alteratives to prevent the formation of cancer cells in other tissues, and to remove any detached cells that may be circulating in the blood. Among the best tonics are hydrastin, ecraceine, chamomile, pyrophosphate of iron, &c. These may be given in alternation or combinations, and in such quantities as may be deemed expedient, to maintain the strength of the patient. The following compound will be found a valuable one for this purpose. Take *hydrastis canadensis* or golden seal, English chamomile, and *chimaphilin umbellata*, or *pipsisseway*, of each one ounce; pulverize, and add to one quart of good port wine. Give one wine glass full three or four times a day.

To prevent the growth of absorbed cancer cells, the following compound will be found valuable: Take oil of tar, two ounces, hydrocyanic acid, ten drops: mix, and let the

patient take from ten to fifteen drops, four or five times a day. To remove the crasial condition of the blood, the compound alterative syrup in connexion with iodide of potassium, or the compound syrup of stillingia, may be used in quantity as indicated. If the caustic application recommended does not prove sufficient to remove the tumour, the following application may be used. Take sulphate of iron, one ounce, add sulphuric acid sufficient to make a paste of the consistency of cream. Surround the tumour with a plaster of white wax, and apply the paste to the tumour, allowing it to remain until a deep eschar is formed. If the first application is not sufficient, repeat it two or three times a day, until the eschar involves the entire tumour. The wax plaster is applied to prevent the caustic from injuring the integuments surrounding the tumour. After the life of the tumour is sufficiently destroyed, it may be sloughed out, as recommended in the first instance. A variety of other caustic preparations used for the purpose of removing cancerous tumours, may be found under the head of pharmacy.

The object, however, of all these applications is to remove the diseased mass in such a way as to effectually prevent the absorption of cancer cells. The reason why caustics are more successful than extirpation by the knife is, that during the operation with the knife, the cancer cells are liable to be penetrated, and conveyed to the surrounding tissues, and from thence to the blood, forming new cancer cell growth in other parts of the body, while the caustic destroys the cell at once, and thus absorption is prevented.

The above plan of treatment applies equally well to all varieties of the disease, although in some forms where the cancerous discharge has produced much exhaustion, a more nutritious diet should be allowed. That this treatment will prove successful in a large majority of cases of early cancer, if space would permit, the most ample testimony could be given.

TREATMENT OF CANCER OF THE UTERUS.

To treat cancer of the uterus, a large-sized glass speculum should be introduced into the vagina, and so adjusted as to entirely cover the portion of the uterus affected. Then apply with the probang a moderately strong solution of vegetable caustic or of sulphate of zinc, allowing it to remain for several minutes, then removing it, apply a thick mucilage of slippery elm, filling the speculum. After which withdraw the speculum, and allow the elm poultice to remain in the vagina, and if necessary secure it by a T bandage. This application should be continued until all traces of the disease are removed. Afterwards the parts should be dressed with very mild zinc ointment, and frequently cleansed by the use of antiseptic washes. The constitutional treatment should be the same as in other forms of cancer.

STRICTURES OF THE URETHRA.

Mr. Hunter informs us that most obstructions to the passage of the urine, if not all, are attended with nearly the same symptoms. Few persons take notice of the first symptoms of a stricture, till they have either become violent, or other inconveniences have been the consequence. A patient may have a considerable stricture, and yet be unconscious that his urine does not freely come away. He may often have, in consequence of a stricture, a tendency to inflammation and suppuration in the perinæum, without feeling any obstruction to the passage of his urine, or suspecting that he has any other complaint. There are three kinds of stricture, viz., the true permanent one, which arises from an alteration in the structure of a part of the urethra; the mixed case, consisting of a permanent stricture and a spasm; and thirdly, the true spasmodic stricture. In all these obstructions, Mr. Hunter remarks, that the stream of water becomes small in proportion to the stoppage; but though this symptom is probably the first, it is not always observed by the patient. In

some instances the water is voided only in drops, and then it cannot escape notice. In other cases the stream of urine is forked or scattered.

Under such circumstances, Mr. Hunter recommends the bougie; and if one of a common size cannot be readily introduced, the difficulty of voiding the urine is likely to depend on a diseased condition of the prostate gland, which should therefore be examined. The spasmodic stricture may be known by its being only of temporary duration. This kind of case, and more particularly the permanent stricture, are generally attended with a gleet. The latter complaint is often for a long while suspected as being the only one, and the surgeon finds all his efforts to effect a cure fruitless.

In diseases of the urethra, and also of the prostate gland and bladder, there is commonly an uneasiness about the perinæum, anus, and lower part of the abdomen.

The first progress of the constriction is, in general, very slow; but when once it has so far increased that the urethra is not wholly relaxed by the force of the urine, its subsequent advances are more rapid, and new symptoms are perceived. The urine is voided more frequently, does not pass without considerable effort, attended with pain, and a straining sensation continues after the bladder is emptied. If the patient accidentally catches cold, drinks a glass of spirituous liquors, acid beverage, or punch, commits an excess in drinking wine, or removes quickly from a warm to a cold climate, the urine will perhaps pass only in drops, or be entirely obstructed. These causes induce in the contracted part a spasmodic action, by which it is closed.

Cold externally applied to the body has so great an effect upon a spasmodic stricture, that a patient who can make water without the smallest difficulty in a warm room, is quite unable to void a drop on making the attempt in the open air. However, on returning to a warm room, and sitting down a little while, he becomes able again to expel his urine.

The symptoms of a stricture are more frequent in persons who lead a sedentary life than in those who lead an active one.

Strictures in the urethra being attended with a discharge, and pain in making water, especially after any excess, are frequently regarded and treated as a gonorrhœa. These two symptoms frequently come on immediately after connexion with women; the degree of inflammation is very slight; the discharge is the first symptom, and is more violent at the commencement than at any other period. The inflammation subsides in a few days, leaving only the discharge, which also frequently disappears in five or six days, whether any means are employed or not for its removal.

What renders a stricture particularly apt to be mistaken for a gonorrhœa is the circumstance that in both diseases, the pain in making water is experienced about an inch and a half from the orifice of the glans penis.

In a more advanced stage the strictured part of the urethra is always much narrower than the rest of the canal. However, it retains the power of becoming contracted and relaxed. In the contracted state, the passage is closed up; in the relaxed, the urine can pass through it in a small stream. The spasmodic contraction must act with considerable force, since the urine cannot even pass in a small stream, and a small bougie, which in a relaxed state of the urethra met with no resistance, can now be scarcely introduced at all. Also, if the bougie be allowed to remain for a few minutes in the stricture, it is not unfrequently grasped so tightly by the spasmodic contraction, that when an attempt is made to withdraw it, some force is required to succeed. The bougie when examined seems as if it had had an impression made round it by a piece of pack thread.

In old cases of stricture the muscular coat of the bladder becomes thickened and stronger than natural, in consequence of more force being necessary to propel the urine through

the strictured part. The bladder in this thickened state does not admit of its usual dilatation, so that the patient is obliged to make water very frequently, so that he is unable to pass the whole night without making this evacuation once or twice.

A nocturnal emission of the semen is another very common symptom of a stricture; and some patients seem to have no other complaint attendant upon the affection of the urethra. A periodical discharge is sometimes brought on by a cold or other occasional causes. The inflammation extends to the bladder; the frequency of making water is very much increased, and the urine very turbid. It is voided for twelve or twenty-four hours, once or twice every hour. And when it is allowed to stand, it deposits a substance in the form of powder, consisting of coagulable lymph. This is the slightest kind of attack. Sometimes the bladder is inflamed in a greater degree, and secretes pus, which is discharged with the urine. In a still more violent attack, the discharge is similar to the white of an egg, and particularly adhesive.

Mr. Home states that it has been discovered by examination after death, to be the vitiated secretion of the prostate gland.

When the inflammation of the bladder becomes still worse, the affection sometimes extends to the peritoneum, and the patient dies.

With regard to the formation of strictures, Mr. Home has noticed, that the membrane of the urethra, like every other muscular structure, is liable to a spasmodic contraction, in which state the canal loses the power of relaxing itself again, till the spasm is removed. This spasmodic stricture is only a wrong action of the urethra; and if the parts could be examined in their relaxed state, there would be no appearance of disease. A part of the urethra once disposed to be prematurely contracted, generally becomes more and more affected in this manner, and at last becomes permanently narrower.

The case now becomes both a permanent stricture, and a spasmodic one; being so far permanent, that it is always narrower than the rest of the canal, and so far spasmodic, that it may become contracted in a still greater degree. When the contraction is not considerable, it appears, on examination after death, to be merely a narrowing of the urethra; but a permanent stricture in a more advanced state, usually consists of a ridge, which forms a projection in the passage.

TREATMENT OF STRICTURE.

In the first place, an attempt should be made to remove the disease without mechanical interference. This can usually be effected if the treatment be of a proper character, and commenced in time.

The treatment which I have found successful in a large number of cases, is as follows:—add thirty or forty drops of the concentrated tincture of gelseminum, to one teaspoonful of soft water, and inject it slowly into the penis. At the same time, give the patient a free anti-bilious purge, and one tenth of a grain of gelsemin. This prescription may be repeated after two or three days, accompanied by a proper diet, baths, &c.

If this course of treatment should not succeed, a mild solution of lobelia and belladonna should be injected into the penis, followed by a weak solution of saleratus and hydrastis or golden seal. At the same time the comp. syrup of stiltingia and iodide of potassa may be used internally, in connexion with mucilaginous diuretics. If in spite of all these efforts, the stricture should still exist, mechanical means should be resorted to. Pass a small bougie gradually through the stricture into the urethra, allowing it to remain for ten or fifteen minutes or longer, if the stricture is obstinate. In the course of twenty-four or thirty-six hours, introduce another of larger size, and so on every day, until a full sized bougie can be introduced. When spasms are occasioned by

the introduction of the bougie, a full dose of lobelia or gelsemin will overcome them. Should the prostate gland be much diseased, the penis may be frequently bathed in a liniment of iodide of potassa or iodine.

SURGEON'S OUTFIT.

The variety of surgical instruments brought into use by the inventive genius of the age has been immense. A large majority, however, are only useful to the manufacturers for pecuniary purposes. No assertion is more true than that a good workman requires but few tools. A good pocket case of instruments, adhesive plaster, ligatures, lint, sponge, bandage, a male and female catheter, a common amputating and trephining case, a stomach pump, with male and female syringes, are an ample outfit for any physician, unless he intends to practise dentistry also, in which event, he should provide himself with such instruments as will enable him to perform all operations in that branch of surgery. In case of fracture, splints will be necessary, but as the only use of splints is to maintain a proper position of the bone, and to make extension and counter extension, every physician or person who has knowledge and ingenuity enough to set a broken bone, has also ingenuity enough to make the proper splints, where a thin board or paste board can be obtained. If splints are made of paste board, and it is important to have them substantial and firm, several strips may be put together and a layer of gum shellac spread between each strip.

WOUNDS.

Wounds are usually divided, 1st. into incised wounds or wounds made by a sharp instrument, as an axe, razor, or knife, &c.

2d. Punctured wounds, made by a sharp pointed instrument, as a needle or awl, &c.

3d. Contused wounds, caused by a blunt instrument, as a club or stone, &c.

4th. Lacerated wounds caused by tearing the integument.

5th. Gunshot wounds caused by a discharge of fire-arms.

OF WOUNDS.

TREATMENT.

The first point of interest in all cases of wounds is the hemorrhage, which occurs in nearly every variety, and frequently to a dangerous extent, especially when it occurs from an artery. Arterial hemorrhage can be distinguished from venous hemorrhage by the colour of the blood, as venous blood is of a bright vermilion, while arterial blood is blue. Arterial blood also passes from the vessels in jets, while venous blood flows in one continuous stream. Where the hemorrhage is active and the wound is on either extremity, a ligature should be applied to the limb above the point of hemorrhage. This may be done by passing a handkerchief around the limb, twisting it sufficiently by means of a stick to prevent circulation, or if convenient, the tourniquette may be used for the same purpose. When the hemorrhage is stopped, or if it is not violent, the parts should be sponged with pure cold water, and several cold compresses applied and well secured by good bandages. The bandages, however, should not be sufficiently tight to prevent circulation, otherwise the parts will become very painful. The compresses should be kept constantly wet with cold water, until the parts are healed. To prevent wetting the adjacent clothing the compresses should be well covered with oiled silk or thick flannel. In cases where foreign substances are left in the wound, much care will be required in their removal, and in cleansing the wound before applying the pads. Where the continuity of the parts is so far destroyed as to prevent the compress from bringing the edges in apposition, either adhesive straps or sutures should be used. In most cases the adhesive straps will suffice. Before applying the adhesive straps, the edges should be brought in contact. If there is

danger of the edges of the wound spreading apart, one or two sutures may be applied, and then the adhesive straps. After the wound is thus dressed, wet compresses should be applied, and repeated as recommended in the first instance. In gunshot and other wounds where suppuration ensues, the edges of the wound may be left slightly open, so as to allow the pus to escape. In some cases warm emollient poultices, such as slippery elm or flax-seed, may be applied to facilitate suppuration. Where suppuration is too extensive, the wound may be injected with a weak solution of sulphate of zinc, alternated with equal parts of Peruvian and hemlock bark in infusion. If hectic fever arises, it should be treated as described under that head. The most important class of wounds, and those which require most prompt treatment, are poisoned wounds.

* The most common of this variety of wounds are those made by the bites of reptiles and the stings of insects. Those made by the bites of serpents quickly poison the blood, which undergoes, as is supposed, a change called zymosis, in which fermentation and decomposition result. The poison of the most venomous serpents seems to have a direct effect on the nervous system; the nearer the wound is to the brain, the quicker these effects appear. Some poisons cause death suddenly, as that from the rattlesnake; while others, as that from rabid animals, require a considerable period of time, in order to develop their full force upon the system. The local effect of inoculated poisons is a rapid, diffuse inflammation, quickly terminating in infiltration and gangrene; or it may produce adenitis, or inflammation of the lymphatics, in which case the ganglia enlarge and suppurate. The contact of poison, matter undergoing degeneration or chemical decomposition, gives rise to another variety termed *desiccating wounds*. The poisons may be engendered in the body before

* Eclectic Medical Journal of Philadelphia, p. 340.

death, or may result from the process of putrefaction, although it is generally thought by surgeons that this latter process tends to destroy the destructive virus. That poison which produces erysipelatous inflammation of serous tissues is very fatal, while that from ordinary putrescence is less injurious. The effects manifest themselves both in the constitution and in the injured part. The local symptoms arise in this manner; a scalpel, needle, or process of bone punctures or tears the finger. The more ragged the puncture and less the hemorrhage, the more is the liability of absorption. After some hours, inflammation begins, and a pustule forms, which discharges a thin, unhealthy puriform fluid, and quickly degenerates into a painful ulcer. The contiguous tissues become reddish, and erythema or erysipelas manifests itself with pain, swelling and heat. Sometimes a deep felon forms; at others, secondary abscess collects in the axilla, and then again the lymphatics enlarge, extending in a red line along the arms; the ganglia enlarge, and suppurate or indurate, or they swell in the axilla, under the maxilla, extending to the trunk of the body, giving rise to adynamic fever. In these cases there is sometimes severe pain in the shoulder, and abscesses form in the glands, or a diffuse infiltration takes place in the areolar tissue of the corresponding side.

The general system, in other instances, suffers derangement. The poison may be absorbed into the blood through the lungs or skin. The patient feels feverish, languid, debilitated, and desponding. A fetid gas is exhaled from the body, and expelled from the bowels, closely resembling that of the cadaver. Sometimes after diarrhœa and profuse perspiration, and free diuresis, the symptoms abate, and health returns. From the local affection, inflammatory fever is often developed, in a degree proportioned to the local disease, and this runs into an adynamic, or typhoid type, with prostration and collapse. In rare cases, the constitutional depression is so sudden as to cause death before the local disease is fully

developed. These resemble cases of poisoning by the bites of serpents. In the majority of instances the disease is confined to the part injured, with some erythema and erysipelas, which subsides under proper treatment, without causing much derangement of the constitution.

TREATMENT.

The local treatment should be of a preventive kind. As soon as the wound is received, the part should be carefully washed and sucked, if the mouth has no abrasions on the mucous membrane. If hemorrhage is slight and the wound ragged, it should be enlarged with an instrument, and the part squeezed, so as to cause the blood to flow, in order to wash out the virus. After washing, sucking, and bleeding sufficiently, the open surface should be treated with pure nitric acid, which is preferable to nitrate of silver, since the latter does not disorganize the tissue very deeply. When the acid is not at hand, the nitrate of silver, or caustic potassa, or any caustic may be used for a similar purpose. The wound should then be enveloped in adhesive strips, or well covered with collodion, and over these a thin glove of India rubber, or some other protecting membrane or dressing should be worn. The dissection may then be continued with safety. Other precautions are necessary. The general health should be in a good condition. Digestion should be active and vigorous; temperate habits, a sufficiency of outdoor exercise, cleanliness, and a natural and active condition of the skin, and excretions generally, are all necessary, in order to prevent the accession of this disease on the slightest exposure. More caution should be used in the dissection of recent subjects, in post-mortem examinations, and especially in cases of death resulting from disease of serous tissues, from puerperal fever, erysipelas, and when the dissector is in feeble health. When local symptoms appear, the pustule should be freely opened by the lancet, and a poultice of slip-

pery elm and pulv. lobelia seed should be applied, and kept thoroughly wet by irrigation, and enveloping the whole in oiled silk. If there is swelling of the lymphatics, the whole arm should be frequently bathed in tinct. lobelia. The ulcer should be freely cauterized with sulph. zinc., with a view to produce a slough, and the general symptoms should receive attention. When erythema and erysipelas complicate the disease with abscess and infiltration, free incisions cannot be too early made in the affected parts, followed by the application of the elm and lobelia poultice. Pulverized gum, myrrh, and elm, and lobelia, wet in a solution of chlorinated soda, will be useful to arrest putrefaction.

The general treatment for mild cases, should consist in diaphoretics, laxatives, diuretics, and tonics, with an occasional vapour bath, and exercise in the open air, when practicable. Much will be gained by the wet sheet, so as to procure continued and profuse perspiration, taking the precaution to let the patient drink freely of bland liquids and water, so as to wash out the poison from the blood. In the more severe cases, in which high inflammatory symptoms supervene, the patient should take at once a thorough sweat, by a vapour bath or wet sheet. If the stomach is loaded, an emetic of lobelia should be given, slowly, so as to favour diaphoresis, which should be certainly maintained. Marshmallows, eupatorin, and other diuretics, will prove useful, and a pill of equal parts of inspissated ext. of lobelia and hyoscyamus, should be given every two to four hours in a little lemon juice; aconite, from one to five drops every four hours; veratrum, gelsemin, and other sedatives, may be used for a similar purpose. These agents should be used in sufficient quantities to reduce the frequency of the pulse, and to produce free diaphoresis. When this object is obtained, the patient should then take fifteen drops of the muriated tinct. of iron every four to six hours, and from five to ten grains of quinine every six hours. The use of purgatives, of a mild,

unirritating kind, will prove beneficial in the first stage; but they should not be used so much as to cause debility. The tendency of this disease is to the adynamic type, and, therefore, such remedies are necessary as tend to support the system, and especially the normal condition of the blood. Nutriments should be of a supporting kind; beef-tea, wine whey, the brandy and egg mixture, are articles for this purpose. In case great prostration occurs, carb. ammonia, with xanthoxilin and capsicum, will be needed. Cutaneous frictions with cloths wet in hot alcohol, enemata of quinine and brandy will constitute the best means of relief. When there is evident tendency to gangrene, baptisin, pyroligneous acid, chlorinated soda, yeast and charcoal,—in short, these antiseptics and tonics generally, must be called into requisition.

The practitioner should not despair even in the worst cases, for the poison seems to pass off in a limited period of time; and if the vital powers can be for a while sustained under the influences of the depressing agent, the disease will terminate favourably. Several severe cases have come under my observation, which, under the treatment above recommended, were restored to health.

I cannot too much urge upon the practitioner the necessity of keeping up a constant and free diaphoresis. The bath and pack-sheet will do wonders in this disease, and no case should be suffered to terminate unfavourably until these have been thoroughly tried. The air of the room should be pure; putrescence should be destroyed by vinegar and chloride of lime, and every means should be used to remove from the body the clothing that is impregnated with the poison excretions.

Treatment for the Stings of Insects and the Bites of Serpents.—The stings of bees should be first extracted, and the application of salt and water, or aqua-ammonia, or the liquor potassæ, will generally prove successful. A better application is the saturated tincture of lobelia applied frequently.

Dr. Hill recommends the application of a *raw* onion, cut through the middle, and its incised surface applied to the affected part. When erysipelatous inflammation follows, a poultice of mashed raw onions, applied often, will be useful. It is thought by many that this application possesses the power to absorb virus. A similar absorbent power is thought to be found in the application of fresh meat to a poisoned part warm with animal life. If it is really useful, it undoubtedly produces good by its influence in absorbing putrescence and poisonous gases from the diseased tissues. In cases in which the constitution suffers, general treatment for febrile symptoms should be instituted. Care should be taken that no means are used that would tend to cause a retrocession of the poison upon the deep-seated tissues and organs.

For the bites of the scorpion, it is said that olive oil is a valuable remedy. This is likewise useful for mosquito bites. In rare cases, these slight injuries prove very troublesome, by the production of diffusive cellular inflammation. Dr. M'Clellan relates a case in which amputation was performed in consequence of the results of the bite of a spider. When ulcers, or erysipelatous inflammation results, the part should be destroyed by nitric acid, caustic potassa, and a poultice of elm and lobelia applied, to favour the promotion of a slough. This should be done in the early stage, before the disease has implicated important and deep-seated tissues. If there is prostration of the system, stimulants should be prescribed, the carb. ammonia, capsicum, brandy and quinine. The treatment for the bites of serpents should be more energetic, since the symptoms are rapid in their development, and alarming in their character. The part suddenly swells and becomes painful, even from the bite of the common viper. These symptoms, however, seldom produce much constitutional disturbance, and are removed by cold irrigation and the remedies recommended for the stings of

insects. But the bites of the rattlesnake in our country, and of the cobra da capello in India, are followed by sudden dissolution. The action of the former upon the nervous system, through the blood, speedily arrests the vital functions, by the production of asphyxia, or by changing the blood. The first indication of treatment is to prevent the absorption of virus, and to expel it from the part bitten. A ligature should be placed around the limb, between the wound and the heart. Then, if practicable, free excision should be made; and if not, free incision, with a view to favour hemorrhage. The wound, if the patient's mouth is not abraded, should be thoroughly sucked, after which the mouth should be rinsed with brandy; or a cupping-glass may be applied. These means should be continued for hours, in order to completely expel every molecule of the poison. Afterward apply the nitric acid, nitrate of silver, or caustic potassa, to the wound freely, to disorganize the tissue; and then apply a poultice, as recommended for dissection wounds. If diffuse inflammation begins, free incision should be made, in order to permit of the escape of the infiltrated fluids. The general treatment found most successful in this country is the drinking of large and repeated draughts of whisky, or some other alcoholic beverage. From a pint to a quart should be swallowed at once, when the constitutional symptoms manifest themselves. No intoxicating effect follows, but the whole force of the alcohol seems to be expended in controlling the action or progress of the poison in the blood.

Professor Baldrige, of Cincinnati, recommends for this accident the use of a strong decoction of common plantain, with milk and hoarhound, drunk freely, and the same applied to the part. Sweet oil has been recommended, and the *uvularia grandiflora* is said to be efficacious. According to Liebig, the blood undergoes a process of fermentation in zymotic diseases, and alcohol tends to arrest the process within the body and out of it. Alcohol, too, very readily

permeates tissues and passes into the blood. Ammonia is a valuable stimulant in these cases. Arsenic is recommended by the Allopathic school, which does good on the same principle as alcohol, if it is at all beneficial, by arresting decomposition and fermentation in the blood. Alcohol fulfils the same indication, and is much safer. Galvanism is useful to keep up artificial respiration until other medicines have time to exert their influence. When there are conveniences at hand, the application of a vapour bath will be useful by inducing free diaphoresis.

Dr. T. B. Carpenter affirms that in zymotic diseases the poison is mainly eliminated by oxydation in the lungs and cutaneous surface. Accordingly, the use of such agents as tend to produce free and copious perspiration, and keep in active operation the respiratory functions, are indicated. No agent is better adapted to fulfil these indications than the use of galvanism, applied to the muscles of the chest, to the medulla-oblongata and epigastrium; and the use by enemata of the comp. tinct. of lobelia and capsicum, and the vapour bath. Sometimes vomiting is excessive, and when so, the best way to arrest it will be to cause the patient to drink freely of warm water and an infusion of lobelia, to produce free emesis, after which the stomach will usually become more quiet. Sinapisms should be placed along the spine, and every stimulus afforded, both internal and external, within the reach of the practitioner.

Hydrophobia.—This class of wounds is generally produced by a rabid animal.

Rabies in the dog is said to be of two forms. In the first, there is an increased action of the synovial and locomotive functions, the sensori and excito-motor system of nerves being the parts most affected. This form gives rise to the peculiar disposition to bite, characteristic of this disease. In the animal there is a recklessness, a tendency to lick sub-

stances around it, to bark, and snap, or it flies from the house suddenly, and then returns quiet and obedient. There is thirst, loss of appetite, and a redness of the eyes, a haggard and half closed appearance being perceptible; there is a flow of saliva, the head is erect, the nose pointed upward. When about to bite it approaches quietly and in a friendly manner, and suddenly makes a snap. In the second form there is less excitability, more depression, with but little tendency to bite or to a change of locality. The muscles of the jaw seem partially paralyzed, and there is a constant flow of saliva. The animal drinks with difficulty, or not at all, and does not manifest great dread of water. The most characteristic symptom is the rough, harsh bark, very peculiar and diagnostic.

In the saliva of animals thus affected, there is a poison, which when inoculated into the human body, gives rise to a disease termed *hydrophobia*. This symptom does not arise from any peculiar hatred that the patient has for water, but from his great inability to swallow any liquid. There is a spasmodic closure of the glottis, which tends to produce asphyxia.

It is a peculiar circumstance that this disease requires a certain time for its development, which is termed the *period of incubation*, a period during which zymosis takes place in the blood, when the general system becomes sufficiently affected to develop the local symptoms. Inoculation is not always sure to produce the disease. This virus is generated in the dog, fox, wolf, jackall, cat, and badger, and from them is communicated to man. The most dangerous forms of wounds are those made upon unprotected parts. Bites through clothes are less dangerous, inasmuch as they tend to prevent the contact of the poison, which may be inoculated just as well upon an abraded or denuded surface from any other cause. The period of incubation varies from five to ten weeks. The symptoms may be divided into two kinds,

the premonitory and the real, which are fully described in all systematic works on surgery.

The Eclectic treatment of hydrophobia consists in the use of a tea, drunk freely, of sculleap, nettlewort, (the *leonurus cardiaca*,) and lobelia, until relaxation and emesis are produced. The vapour bath should be applied whenever there are symptoms of an approaching paroxysm, and the tincture or the extract of lobelia, with *scutellaria*, and *ictodes fetida* and *cypripedin*, should be given to promote diaphoresis and relaxation. If, however, these means fail, the lobelia should be given by enema until the system is brought freely under its prostrating effect, and the spasmodic tendency is entirely overcome. After the paroxysm is subdued, the nervines and tonics should be used. Proper attention should be given to the condition of the bowels. Beef-tea, wine whey, and a mild and easily digested diet is necessary. The local treatment is sufficiently described in the remarks on the treatment of bites of serpents. Heretofore nothing has been discovered in which the profession confide for the removal of this disease. Judging from its pathology, we should *a priori* infer that powerful diaphoretics, and antispasmodics and nervines were indicated, and the results of experience fully corroborate the truthfulness of the principle. The application to the spinal column of ice, the necessity of perfect quiet, and freedom from all exciting causes, the injection of water into the veins, the inhalation of ether and chloroform, are the most plausible means recommended by the Allopathic profession. But the treatment which is most safe, and in accordance with its pathology, is that which is above recommended. The lobelia and vapour bath are two of the most powerful agents in the *Materia Medica* to overcome spasm, and to eliminate poison from the blood through the skin. These should be used thoroughly whenever there is any demand for their use. Between the paroxysms the patient should take a pill of equal parts of *cypripedin*, *scutellarin*,

and extract of lobelia, once in five hours; and an emetic of lobelia once in two or three days, with the bath. Under this treatment, prescribed by the late Prof. Calvin Newton, several cases of confirmed hydrophobia were cured. The gelsemin is also a powerful antispasmodic which may be beneficially used. Another remedy which is highly recommended by Prof. I. G. Jones for the cure of hydrophobia, is the *anagallis arvensis*, the red chickweed, or scarlet pimpernel. In his work on Theory and Practice, he reports several cases cured by this simple remedy. *Cannabis indica* is highly recommended. During the entire course of treatment great care should be taken to sustain the strength of the system by proper nutriment, for unless this is done, the patient is liable to die between the paroxysms from exhaustion of the system.

Tetanus, like hydrophobia, is often the result of wounds, and is similar in its pathology, both being diseases of the spinal cord, produced by causes at first of a local nature. The characteristic symptom is spasm. When the muscles upon the anterior part of the body contract most, so as to bend the body forward, it is called *Emprosthotonos*; when those on the back, *Opisthotonos*; when the body is bent to one side, *Pleurothotonos*. Tetanus may be acute or chronic, traumatic or idiopathic. The acute and traumatic are most frequent, and come most properly under the care of the surgeon. This disease occurs most frequently in hot climates, from punctured and lacerated wounds in tendinous parts. It is common in military practice, and is more often observed in men than in women. The predisposing causes are not well known. The period of development greatly varies. Usually, however, it occurs in from one to thirty days from the time of the injury. It is a disease of the excito-motor nerves.

SYMPTOMS.

At first there is pain and stiffness in the neck and about the jaw. The natural antagonism of the facial muscles is wanting, giving rise to a peculiar ghastly and puckered appearance. Thirst and dryness of the fauces, difficult deglutition and mastication, stiffness and rigidity of the neck, tonic spasms of the masseter and temporalis muscles, distorted eyeballs, dilated nostrils, pain shooting through from the lower end of the sternum to the back, caused by spasm of the diaphragm, are the usual symptoms. Then succeed general spasms of the abdominal and respiratory, and of the entire muscular system. The sphincters are involved in the general spasm, the bowels are, therefore, constipated, and the urine is retained. There is intense pain and profuse perspiration. The pulse, before full and strong, becomes weak. The intellect is unclouded until gradual asphyxia and exhaustion bring on the coma of death.

In the acute form, the disease seldom continues beyond a few days.

The treatment is local and constitutional.

The local treatment should consist in dividing the nerve by making, close to the vessel if possible, a V shaped incision down to the bone, so as to divide all the nervous communication between the part and the spinal cord. The part should then be enveloped in a warm poultice of slippery elm, or put into a warm alkaline bath, or fomented, according as these means produce relief to the patient. To the divided tissues atropine may be beneficially applied, to lessen local irritation. With a view to produce free sloughing, caustic potassa is recommended, its use to be followed by poultices and fomentations. The bowels should be opened by three grs. jalapin, ʒj. cream tartar. Divide into three powders, and give one every three hours. Then the tincture of lobelia, and a strong infusion of scutellarin and cypripedin should be given, at first in small doses, and gradually increased until

free and copious emesis is produced. If this should not overcome the spasm, a vapour bath should be administered, and enemas of lobelia given until every muscle is relaxed, and the respiration and deglutition are normal and easy. The use of lobelia is much safer than that of tobacco, and its relaxing effects may be carried to a greater extent without endangering life. The cannabis indica, given in three grain doses of the extract, repeated every hour or half hour until narcotism is produced, is highly recommended by Dr. James Miller. At the same time that these powerful sedatives and antispasmodics are acting upon the system, especial care should be observed to sustain the strength by nutritious enemas, and by the drinking of nourishing broth and gruel, and the administration of stimulants and tonics. Of late the application to the spine of solid ice, impacted in a large intestine or a bag, has been highly recommended to allay inflammation of the spinal cord. It operates as a powerful sedative, and may be applied so long as the system is not prostrated by its effects, or so long as it does not produce syncope, chilliness, and a feeble pulse. Aconite and belladonna, more especially the former, have been used to considerable extent in cases of disease of the spinal cord. Opium has been thoroughly tested in these cases, and found not to be well adapted to the removal of the difficulty. To procure rest, hyoscyamin, conium and lupulin will be found preferable remedies. Aconite, as an antiphlogistic, is deserving of high reputation, although its antispasmodic tendency is not so great as that of lobelia. The tinct. of the cannabis indica is often useful, and should be prepared from the inspissated extract. I will here remark that the strength of this remedy is variable. In Pennsylvania Hospital an article has been used so powerful, that one-twelfth grain has been the prescribed dose. It is well, therefore, to test the strength of each specimen of the remedy before administering the maximum dose, to which reference is above made. Chloroform and ether are thought

to be beneficial; but these anæsthetic agents are not so valuable as the relaxing means above referred to. If, however, the circumstances should require their use, after other means fail, they deserve a trial. Counter-irritation over the spine, with the endermic use of aconitine, atropine, and morphine, will sometimes prove valuable adjuncts in treatment, but will seldom be necessary after the use of the means already described. Veratrin, from the *veratrum viride*, is another sedative agent of great power, that is applicable in cases of high sthenic inflammation, and will, therefore, be most useful in the inflammatory stage of this disease.

Aside from these remedial measures, the use of hygienic means is imperative. A pure air, frequent ablutions of the surface, perfect freedom from care, quiet, and seclusion from noise and light, and all intruding visitors, must be observed.

A summary of an Eclectic constitutional treatment, adapted to the cure of this formidable disease, is this:—absolute rest and seclusion, purgations to cleanse the alimentary canal, intestinal enemas of a nourishing and stimulating character, nutritious gruels and broth, given frequently in small quantities, cold applied to the spine so long as agreeable, and not too sedative; the use of lobelia, scutellarin, cypripedin, in infusion, to produce emesis and relaxation, with the early administration of tonics and stimulants, on the first appearance of prostration. Under this course of medication the majority of cases will recover, for I feel confident that this treatment is much more philosophical and effectual than that heretofore prosecuted by medical authors of the Allopathic school.

HECTIC FEVER.

When fever arises as the result of the absorption of pus, it is called *hectic fever*. In many instances hectic fever has been known to arise from the introduction of very small quantities of pus into the blood.

In surgical practice hectic is very frequently met with in

cases of disease or injury of the joints. It may occur in all cases where pus is so confined as to be absorbed, as in the last stages of consumption; also where there is great debility, especially in scrofulous and tuberculous constitutions.

SYMPTOMS.

In surgical hectic, the symptoms are never so prominent as they are in consumptive or scrofulous subjects, yet they are sufficiently so to indicate the true nature of the disease.

In hectic fever, one of the first symptoms is usually wandering pains in the limbs like rheumatism, in some cases being of the most acute and torturing character.

In one case of hectic fever which came under my notice, caused by the absorption of pus from the uterus, the premonitory symptom was acute pain in different parts of the body, of a neuralgic character, appearing in regular paroxysms, and lasting four or five hours. In other cases the pain amounts only to a mere aching of the bones, accompanied by a feeling of languor and lassitude, very much resembling incipient ague. As soon as the fever is fairly set in, the pains mostly leave.

“The first symptoms of hectic may be easily, and in fact, frequently are unnoticed; it is so irregular in the occurrence of its paroxysms, that in any six days of its duration, there will not be three of these days in which the paroxysm will happen at the same hour.

“The patient at first only feels a little weakness; he is conscious of not being able to use as much exertion as he used to do, and his friends remark that he does not look so well; he rapidly loses flesh; yet his appetite may be as good as usual, and his functions go on regularly. It is soon perceived that once or twice a day he gets a change; about noon a shivering comes on, and lasts perhaps for half an hour, during which he looks pale and his countenance drawn in; after

this the warmth returns, and the heat soon increases beyond the standard of comfort, particularly in the palms of his hands, &c., which have a peculiarly biting hot feel. There is nothing in this cold and hot stage of hectic, like the corresponding symptoms of most other fevers. He may without arousing any particular attention in his attendants at the incident, get his chair drawn nearer to the chimney, have the fire stirred, and have something wrapped round his feet: by and by he complains that the fire is too brisk, moves away from it, has a screen interposed, causes the door to be left open, and that's all. Sometimes the chilliness returns during the hot stage, or there comes on the sweating stage, (which in hectic is not a general full perspiration over the whole body,) and on its subsidence, leaves the patient pretty well until the next attack, which usually comes on about six or seven o'clock in the evening. The sweating is seldom perfect; it is generally over the chest and arms, but sometimes on the lower extremities alone; it is not like the sweat in some other cases, but a greasy kind of moisture. The appetite, as I have said, remains tolerably good, and the thirst is less than in other fevers. As it goes on the patient still loses flesh and strength; the appetite begins to decline; his tongue continues clean, but redder than natural; his mind becomes easily excited; his pulse is about ninety, seldom gets as high as one hundred and twenty; his countenance changes; his forehead seems larger from the falling off of his hair; his eyes get a pearly white appearance, and sometimes are peculiarly brilliant; he flushes often, or there is a circumscribed redness on one or both of the cheeks; his nose is drawn in, and his finger nails become incurvated. A colliquative diarrhœa generally occurs in the morning, and when this is the case, he sinks rapidly; not indeed, as some imagine, from the consequences of the diarrhœa itself, but from the extent to which the fever has arrived. He will complain of a slight sore throat perhaps, and, on examination, a number of white

specks, called aphthæ, are seen on the soft palate, or perhaps on the tongue, or under the tongue; or what is more frequently the case, there will be seen a large ulcer in the throat.

“In the beginning the hectic has intermissions, more or less perfect, but it soon becomes remittent—that is, never entirely subsiding. In some surgical diseases, as cancer, this fever presents few of its prominent characters well marked, such as you might observe, for instance, in extensive disease of a joint. In some diseases you will see one symptom, as the diarrhœa, almost alone; in others the sweating, and so on; in fact, there is great variety in its appearance and course.”

As the disease becomes advanced, night sweats usually take the place of the fever, and in many cases the night sweats are consecutive upon, or may be alternated with it. Whenever this occurs, the patient usually sinks rapidly, and unless relieved, will succumb to the disease in a short time.

TREATMENT.

The treatment of hectic depends much upon the cause or causes which give rise to it. When it is dependent upon disease of a local character, the local disease should be treated in connexion with constitutional. If caused by confined pus, if the pus is so situated as to be discharged, it should be done, and thus prevent its absorption.

The internal remedies consist entirely of antiseptics and tonics. Among the best antiseptics used for hectic, is strychnine in doses of from one-tenth to one-eighth of a grain. The preparation of B. Keith & Co., of New York, is the best that I have ever used. Also one half to one drop of hydrocyanic acid three or four times a day, in combination, or in alternation with phosphate of lime, or in connexion with the consumption-pill, or the compound wine bitters, as recommended in the formula of this book. In some cases Beach's wine bit-

ters may be used. For the fever, aconite may be used in connexion with warm baths and cooling acidulated drinks. If there are night sweats, give the following:—three table-spoonfuls of strong sage tea, and five drops of nitro-muriatic acid, every two or three hours during the day. The surface should be bathed every night in a strong solution of salt and water, followed by a cold bath in the morning, and brisk friction, until a complete reaction is produced. The patient should be allowed a liberal amount of brandy, wine, or porter, three or four times a day, with exercise in the open air, and as strong diet as the stomach will tolerate.

BRUISES.

Bruises are caused in various ways, by pressure between two hard substances, by falls and other injuries that rupture a greater or less quantity of capillary vessels, nerves, &c., without tearing, cutting, or absolutely destroying the continuity of the parts. Slight bruises in many instances are quite as painful as those which are more extensive, although from extensive bruises much more serious consequences are liable to follow.

SYMPTOMS.

A bruise is usually of a dark purple colour, (ecchymosis.) This is owing to the escape of blood from the minute vessels into the areolar tissue.

In the course of a few hours after the bruise, the parts usually become very painful and swollen. If the injury occur to the fingers or toe nails, they will become blackened, and the pain will be very severe. If the bruise is very extensive, the countenance will be pale, and there will be nausea and vomiting, weak pulse, anxious expression of the countenance, imperfect respiration, dull heavy pain in the head, unless the injury be directly to the brain, in which case, there will be stupor, and in some cases, involuntary discharges from

the bladder and bowels. The surface will be cold and covered with a clammy sweat. If the bruise involves the vital organs to any considerable extent, it may very soon terminate in death. But where the injury is less severe, in a short time reaction will take place, the pulse will become full, the skin hot and dry, with general fever, &c., &c.

TREATMENT.

The treatment will depend altogether upon the nature and extent of the injury. If the injury be slight, but little more is necessary than to wrap the part in cold water and remain quiet for a short time. But when the bruise is violent, the patient ought immediately be put to bed, and the injured part should be kept in a hot pack. At the same time, a warm cordial should be administered, or some active stimulating medicine should be given, as capsicum, xanthoxylin, &c. When reaction takes place, to remove the fever, aconite or veratrum should be given, and the entire surface should be frequently sponged in tepid water. When the constitutional symptoms are controlled, if the hot packs have restored the normal circulation to the injured part, no further treatment will be indicated. On the contrary, if the part still presents a dark purplish appearance, is tumid and painful, the following stimulating poultice will be found valuable: Take pulv. slippery elm, pulv. indigo weed, equal parts; gum myrrh one half part, and pulv. prickly ash one fourth part; wet with good brewer's yeast, and apply, changing as often as indicated. Internally from five to ten drops of arnica, and a mild antibilious purge will be all that is indicated, unless the vital organs are involved, when stimulants and tonics may be required.

The old practice of bleeding patients who have received a recent injury, is a very pernicious one, and cannot be too strongly deprecated. Its baneful effects are not unfrequently exhibited in the consumptive and scrofulous progeny of those

who have been the subjects of this disastrous practice. Where the nails are bruised and the blood settles under them, much relief will be found by cutting through the nail, and allowing the blood to escape, afterward applying hot packs. For a wash to bathe the parts where the cuticle is not destroyed, tincture of arnica and lobelia will be found valuable. In all cases the parts should be so thoroughly stimulated as to prevent gangrene and mortification, or the formation of ulcers, which so frequently occurs, as the result of bruises.

NECROSIS, OR CARRIES.

The bones, as well as the soft parts, are liable to inflammation, ulceration, necrosis, or death and exfoliation.

SYMPTOMS.

When inflammation of the bones occurs in an acute form, there is usually pain, frequent and hard pulse, with marked derangement of the nervous system. When the disease assumes a chronic form, the pain is more of a heavy aching character than in the acute form. In most cases where the disease assumes a chronic character, it is either connected with a syphilitic, mercurial or scrofulous taint, or appears in one who has taken a large amount of iodide of potassium; or it may be the sequel of acute inflammation, arising from colds, rheumatism, periostitis, &c., or it may be the result of metastatic, of syphilitic, mercurial or scrofulous diseases. Necrosis of the bone frequently occurs, as the result of deficiency of osseous tissue in the food, hence it is more frequently met with among the poor and ill-fed than others. Wherever necrosis occurs, and whatever cause may contribute to it, exfoliation and discharge of bony matter are its symptoms.

TREATMENT.

The general treatment consists in supplying the system with plenty of material for bony tissue, and the thorough cauterization of the diseased bone.

The following compound I have found most effectual as an internal remedy in necrosis.

Take phosphate of lime, one-half ounce; common table salt, one-fourth ounce; carbonate of iron, one-fourth ounce; the white of six eggs; mix the white of eggs, lime, salt, and iron, and add one pint of best port wine. Let the patient take from one-half to one wine glassful three or four times a day. The bowels should be regulated by neutralizing mixture and leptandrin or euonymin, and the surface frequently bathed in lye water. The diet should be nutritious. The practice of giving alterative syrups, with iodine and potassa, in all cases of bone disease, I believe to be fraught with evil; unless there is some abnormal deposit to be absorbed, it should not be practised. The object of the treatment is not to increase the molecular changes of the part by alteratives, but to prevent such abnormal changes by the use of tonics and antiseptics. Hence quinine, hydrastin, oil of tar, mactrotin, ceracein, pipsisseway, chamomile, poplar bark, balmoney, iron, wine and porter, are among the class of remedies to accomplish the desired purpose in necrosis. The bone should be thoroughly cauterized with caustic potassa, or the sulphate of zinc, followed by the fir and zinc ointment, and stimulating liniments of alcohol, oil of hemlock, origanum, amber, sassafras, &c., &c. If the adjacent soft tissues should be inflamed, elm poultices, hot packs, &c., are among the most radical means of subduing it.

HIP DISEASE, OR MORBUS COXARIUS.

CAUSE.

The cause of hip disease is the same as of necrosis, of which it is one variety, viz.: falls, dislocation of the hip-joint, bruises of the joint, and scrofulous, mercurial or syphilitic taint.

SYMPTOMS.

Although the symptoms of hip disease are very marked, it is often mistaken for other diseases.

A case occurred in my practice of a little girl who had hip disease, but was treated by an allopathic professor for rheumatism. This mistake arose from the fact that the only complaint the child made, was of pain in the knee.

In this disease the pain is nearly always foreign from the real seat of the disease, hence the patient complains of pain in the thigh, knee, foot, &c. Deformity of the limb is an early symptom, as it will be very considerably turned inward, the knee frequently resting against the other. Very acute pain may be caused in the hip, by pressing the thigh bone firmly upwards. The sleep will be disturbed, the bowels irregular, appetite capricious, and in some cases there will be hectic fever and night sweats. The hip will swell, become painful, and entire loss of the use of the limb will follow. In many cases, the membranes around the head of the bone will become so diseased as to pour out a large quantity of muco-purulent matter, or sero-purulent fluid, filling the joint, and causing the head of the bone to leave the socket, thereby producing still greater deformity, as in this case the limb is not only turned inward, but is very much shortened. In some cases the soft tissues become red, swollen, and inflamed, and suppuration occurs near the point of the disease, while in other cases, the pus, which is formed around the joints, passes along the fascia of the thigh, and makes an opening down the leg. I have attended several cases of hip disease, where in this way a large number of openings were formed along the limb from the hip to the knee. The constitutional symptoms vary according to the nature and cause of the disease. In some cases they are very slight, while in others, night sweats, diarrhoea, hectic fever, &c., are prominent symptoms.

TREATMENT.

The most effectual treatment in the early stage of hip disease, is very simple. A large irritating plaster should be

placed over the entire hip, and caused to remain until a thorough counter-irritation is effected, and a discharge occurs. When the discharge ceases, the plaster should be again applied, and renewed from time to time until the disease is entirely removed. The internal treatment should consist of mild purges, frequent baths, phosphate of lime, salt, iron, and tonic syrups. Where the disease is connected with a scrofulous constitution the compound syrup of phosphates, or the syrup of hypophosphites, should be given in two or three drachm doses three or four times a day. Where the disease is more advanced, and the openings have occurred, they should be thoroughly cauterized, and covered with the fir and zinc ointment. The entire limb should be bathed with alcohol four or five times a day, to which is added a moderate quantity of camphor and oil of hemlock. If there is much swelling, a poultice should be applied, composed of equal parts of slippery elm, pulv. hemlock, and Peruvian bark, after the liniment and over the ointment, and changed as often as necessary to keep the parts moist and the ulcer clean. In many cases the cartilages and ligaments become entirely destroyed by the ulcerating process. In this event the limb should be placed in a natural position, and entire rest absolutely enjoined; as the only hope of a cure consists in inducing a deposit of bony material around the joint, in quantity sufficient to induce ankylosis. This can be accomplished by administering wine, malt liquors, vegetable tonics, chalybeates, and a nutritious diet. The capillaries of the part should be excited and stimulated; for this purpose the hip should be frequently bathed in the following liniment:

R.—Alcohol,.....	Oj.
Oil of capsicum,.....	ʒj.
Oil of hemlock,.....	ʒij.
Croton oil,.....	gutt. x.

Mix, and bathe frequently. Also take equal parts of

syrup of hypophosphites, and the syrup of chimaphillin, three or four times a day. Dose, one tablespoonful.

If there are open sores with cicatrized edges, they should be injected with solution of sulphate of zinc, and filled with pledgets of lint smeared with zinc ointment. The limb should be thoroughly bandaged, and supported with splints. Where the head of the bone or acetabulum is decayed, the following injection will be found valuable:—take sulphate of iron, one ounce; phosphate of lime, two ounces; water, one pint; dissolve the zinc and iron in the water, and add twenty grains of tannin. Inject with a small syringe three or four times a day. Bathe the limb with an infusion of bitter herbs in alcohol, followed by brisk friction to keep up circulation. As soon as the patient can walk, gentle exercise in the open air should be taken, and a strict course of diet and regimen pursued until entire recovery is effected.

WHITE SWELLING, OR HYDRARTHROS.

White swelling, in its proper acceptation, occurs most frequently about the middle period of life, but is, however, very often seen in children. There is a difference in its approach in these periods; you will never see a case of white swelling under the age of puberty, without a deviation from health, but not always so when it makes its appearance in after life. Its approach is slow, is accompanied with pain, the patient is only aware of any thing wrong by a stiffness in the motions of the part, and when in the knee-joint, (which is the most common seat of the disorder,) the patient walks badly, with the knee bent.

In this insidious way it may go on for several weeks, but on looking at it, you perceive that the natural points of the joint are obliterated, that it is swollen, and has become more rounded than the sound one, while the natural colour of the integument remains unchanged, as the name of the disease would mark as one of its distinguished characteristics. In

some months, or it may be years perhaps, an abscess forms, and may open near the joint or at some distance from it, even so low as the middle of the calf of the leg, and a quantity of curdy matter is discharged, without at all reducing the swelling of the joint, however; after a time this opening may heal, and another form, which will in its turn continue to discharge.

White swelling of the knee is usually of a chronic nature, but sometimes, as in *morbus coxæ*, it is acute, when it will run its course in as many weeks as in the chronic form it would have taken months to do. In the chronic form, the joint is swollen before any pain is felt, but in the acute case, motion of the limb produces excessive pain before there is any swelling, except perhaps a little fulness from an increased secretion in the joint; the fluid poured out in these cases, does not seem like healthy synovia, but as if a mixture of it and serum.

White swelling might be confounded with other conditions of the joint; sometimes the large bursa above the patella, between the extensor muscles of the leg and the lower part of the femur, becomes inflamed, and fluid is poured out by the sac, and as this bursa often communicates with the general synovial cavity of the knee-joint, it might be mistaken for white swelling of it, but it is very easy to distinguish them; in the case of enlarged bursa, there is no pain in moving the femur and tibia on each other, and if you make the patient extend his leg by the action of its extensors, the figure of the swelling is altered—there will be a hollow made in its middle by the pressure of its muscles and patella—neither of these will be the case if it is white swelling. Sometimes after using a good deal of exercise, or taking a long walk, there will be a pain in the knee and effusion into the joint. This might be mistaken for white swelling, but the difference in the approach of the two is, that in white swelling the pain comes on long before the effusion, while in the other case

they come on together;—there is one great distinction between white swelling of the knee and other diseases of it,—a symptom that never fails to point out the nature of the case clearly, and it is this—in white swelling the flexor tendons of the leg are not prominent as they naturally are, but the hollow in the popliteal space is filled up to their level. In forty-nine cases out of fifty, the position in which you will find the leg is flexed or semi-flexed on the thigh, and lying on the outside, but in the fiftieth case, you will find it extended as straight as possible, and resting on the heel, and the patient cries out with pain if you attempt to move the limb; yet put the patient sitting on the right side of the bed, or on a table, and you may not only flex the limb, but swing it backward like a pendulum, without giving him any uneasiness.

Patients labouring under this disease, seldom complain of pain in the part, but rather a sense of uneasiness—a feel as if it was tired—as if the bones entering into the articulation were not rightly bound together; they have, however, pain in the limb, going upwards towards the abdomen, which they call rheumatic pains, and it is useless to try to persuade them that they are not rheumatic.

There are cases of white swelling met with, where neither the patient nor his friends can assign any reasonable cause for its appearance. Some cases have their origin in exposure to cold or damp apparently, and several are found to come on during convalescence, after fevers of various kinds; some are attributed to the sudden recession of eruptions; but there must evidently be a predisposition to the disease in the constitution or the part, or we must discredit many of the agencies said to induce the affection.

TREATMENT.

When white swelling first makes its appearance by a proper course of medication, it may be arrested at once. In the commencement of the disease, bathe the parts in a lini-

ment made as follows:—*R.*—Oil of hemlock, four ounces; dissolve as much camphor gum in it as it will take up, and add 12 drops of croton oil, and three drachms of tincture of iodine. Bathe the limb thoroughly, after which, apply hot cloths wrung from a strong infusion of equal parts of arnica flowers and lobelia; change as often as they grow cool. With each change of the cloths apply the liniment. The patient should take a purge of anti-bilious physic, followed by a free use of the compound syrup of chimaphilin and phosphate of iron. Take of the compound syrup of chimaphilin, one pint, phosphate of iron three drachms. Dose three or four tablespoonfuls a day. The patient should be bathed three or four times a week, in strong soda water, and a nourishing diet should be allowed. If this course is adopted, and persisted in, it will arrest the disease in the first stage. But where the disease is farther advanced, and openings are formed into the bone, the openings should be enlarged by means of caustics and liniment. Ointments, and poultices should be applied as directed in treatment of hip disease. The constitution should be well supported by means of tonics and antiseptics. The limb should remain perfectly at rest, and the motion of the joint prevented by means of splints. In an indolent condition of ulcer, and a discharge of sanious matter, inject it with a strong solution of vegetable caustic, then take pulverized *phytolacca decandra*, one ounce; *scrofularia marilandica*, two ounces; pulverized myrrh, two ounces; flax-seed meal, one pound; mix, and wet with equal parts of soda water, and lobelia tincture, sufficient to make a poultice, and apply warm. The poultice should be changed, and the ulcer injected as often as once or twice a day.

Equal parts of Beach's alterative syrup, and the compound syrup of *helianthus*, given in tablespoonful doses, three or four times a day, will be found of much value, in connexion with iron, hydrastin, ampclopsin, and other re-

medies given as indicated. Where the bone is diseased, it may be treated as already directed in necrosis and hip disease.

PROLAPSUS ANI OR FALLING OF THE RECTUM.

Prolapsus of the lower portion of the bowels occasionally occurs in both adults and children, and is caused by weakness of the sphincter and other muscles, produced by constiveness, ascarides of the rectum, dysentery, &c.

SYMPTOMS.

One of the first symptoms observed of prolapsus ani, is the appearance of a large red tumour, after going to stool. Unless this be immediately returned, it will become painful, strangulated, and will produce obstruction of the bowels, fever, and general constitutional disturbance.

TREATMENT.

In all cases of prolapsus ani, the first indication of treatment is to return the prolapsed bowels, which can be done by bathing the parts in warm water, and then making gentle pressure upon them upwards, at the same time dashing a handful of cold water in the patient's face. After the parts are thus returned, a pad, wet with a strong solution of oak bark and golden seal, should be applied to the rectum, secured by a T bandage. As soon as this is accomplished, the cause of the difficulty should be ascertained and removed. If it be ascarides or seat worms, an injection of aloes and balmony into the rectum, and a free purge of podophyllin and santonine will usually remove them. If the first injection does not succeed, it should be repeated, followed by injections of cold salt and water, or ice water.

If the muscles of the rectum are weak, the following ointment may be used :

R. Tannin,	gr. x.
Geranin,	gr. xx.
White wax,	℥j.
Glycerin,	℥j.

Melt the wax, and mix with the glycerin, and add the tannin and geranin, while it is cooling. Apply to the part four or five times a day. The bowels should be kept regular by the use of vegetables and fruit, and an occasional dose of neutralizing mixture.

BLEEDING AT THE NOSE OR EPISTAXIS.

This is a difficulty which frequently occurs about the age of puberty. It also occasionally occurs during the progress of typhoid and other forms of fever. It is very liable to occur in seasons when fruit and vegetables are scarce, and the blood is in a scorbutic condition.

TREATMENT.

If the hemorrhage is violent, apply ligatures to the limbs, bathe the head in cold water, and the feet in hot water. If this does not arrest the hemorrhage, give from five to twenty drops of the oil of erigeron every half hour, and inject the nostrils with a strong solution of matieo. When the feet are removed from the warm bath, mustard plasters should be applied to them, and also to the back. This treatment has proved successful when all other resources have failed.

RED NOSE OR LIPOMA.

Lipoma is a chronic enlargement of the subcutaneous and cutaneous structure of the nose, presenting a peculiar lobulated appearance, and is usually of a purplish red color.

TREATMENT.

Apply a strong irritating plaster until free suppuration ensues, and follow with mild zinc ointment, and allow the parts to heal by cicatrization. Or the tumour may be dissect-

ed off, (care being taken not to cut through the nostrils,) allowing the parts to heal by granulation, keeping them covered with ointment.

NASAL POLYPI.

A nasal polypi is a soft moist tumour of a yellowish colour. Its structure is very nearly identical with that of the mucous membrane, to which it is firmly attached.

SYMPTOMS.

One of the first symptoms of nasal polypi, is the sensation of a stoppage in the nostril, which eventually amounts to a nasal respiration. When this occurs, by inspection a tumour may be observed in the nasal cavity, of a shining grayish colour. By forcing the breath through the nostril it will be noticed to descend, and the reverse by nasal inspiration. As the polypus grows it will press upon the neighbouring parts and cause disfiguration of the nose and face.

TREATMENT.

In the early stage of polypus it may be removed by snuffing equal parts of pulverized blood-root and matico. If the tumour has become very large, it will be necessary to remove the main body by means of polypi forceps, and afterwards use the snuff to prevent further growth.

To remove the polypi with the forceps the patient's head should be held by an assistant, and the forceps should be made to grasp the main body of the tumour, when by a twisting motion it should be removed. If there is hemorrhage it can be arrested by matico.

HARE LIP.

The cure of hare lip is purely surgical, and can easily be effected by a well conducted operation. The operation for single hare lip consists in neatly paring the edges from one point of the cleft to the other. After which the edges should

be brought in apposition, and as many fine hare lip pins inserted as will maintain the parts in their position, when the twisted sutures are applied. At the expiration of 60 or 70 hours, the pins may be removed, and the parts kept in apposition by means of adhesive strips. The operation for double hare lip is the same as for single. During the treatment the patient should avoid violent exercise, and take no food that requires much mastication.

TUMOURS OF THE GUMS OR EPULIS.

A tumour of a fibrous character often springs from the periosteum and edges of the alveolus, springing up between and loosening the teeth.

TREATMENT.

The treatment consists in an entire destruction of the tumour by means of caustic potassa, followed by a wash of bayberry and hydrastin.

ABSCCESS OF THE ANTRUM HIGHMORI-ANUM.

It frequently happens that from inflammation and other causes mucous-purulent matter or pus accumulates in the cavity of the upper jaw.

SYMPTOMS.

In most cases there is a heavy aching in the cheek bone, pain in the head, swelling of the face, loss of appetite, constipation, and in some cases I have known hectic to arise. If relief is not obtained by exit of the matter, the pain will be throbbing and very excruciating. The swelling will increase, and will present a deep purple colour.

TREATMENT.

In the first place, any carious tooth in the neighbourhood of the antrum should be extracted. Or if there is no cari-

ous tooth, the second molar should be removed, and most commonly pus will escape. If it does not, an opening should be made by means of a small drill in the canine fossa through to the antrum. After the matter is discharged, a mild infusion of hydrastin should be injected into the cavity until the discharge ceases. At the same time the bowels should be kept free by means of neutralizing mixture, and other constitutional symptoms treated as they occur.

ENLARGEMENT OF THE UVULA.

Enlargement and elongation of the uvula are frequent symptoms of scrofula, consumption, and other diseases. When the uvula becomes elongated, it proves very irritating, causes an excessive secretion in the throat and fauces, and sometimes results in inflammation and ulceration.

TREATMENT.

Elongation of the uvula can usually be remedied by frequently gargling the throat with cold water and the following wash.

R.—Fluid extract rhusin,..... ʒj.
 “ “ bayberry,..... ʒij.
 water,..... ʒij.

Mix and gargle the throat three or four times a day. Also bathe the throat upon the outside in strong salt and water. If constitutional difficulties exist, they should receive attention. If after these means have been used the uvula still proves troublesome, it may be clipped with a long pair of scissors or an instrument adapted to that purpose.

GONORRHOEA.

Gonorrhœa is a disease affecting the urethra, prepuce and glans of the male, and the vulva and vagina of the female. It is accompanied with a discharge of muco-purulent matter. Gonorrhœa is generally considered as a specific, local and contagious disease. That it is a specific and contagious dis-

ease does not admit of a doubt. It is also in a great majority of cases local. Yet I have met with cases where gonorrhoea appeared to be constitutional, without any direct local affection. Again: in cases where it appears purely local, there are usually a series of constitutional disturbances, which appear to be so connected with this disease, that they may reasonably be said to depend upon it.

SYMPTOMS.

In from three to five days after exposure, the male subject will feel an itching and burning sensation along the urethra, with difficult micturation.

On inspection, the mucous membrane of the urethra will appear red and swollen, and by pressure, a small quantity of muco-purulent matter will be seen to escape. As the disease advances, the difficulty of urinating will be increased, and the discharge will be very profuse. In some cases, the disease appears to extend to the prostate, bladder, and testicles, in which event, the testicles become swollen and very painful, and the difficulty of urinating is aggravated. One of the most troublesome symptoms of this disease is chordee, which consists in the painful erection of the penis at night, with a twist downwards.

In the female, the local symptoms are analogous to those of the disease in the male, save the chordee. The constitutional symptoms in both male and female, consist in the early stage in slight febrile re-action, constipation of the bowels, headache, and derangement of all the secretory and excretory functions.

TREATMENT.

In the first stage of the disease, a free purge of podophyllin and cream of tartar, should be given. At the same time, the parts should be thoroughly packed with cold water, and mucilaginous injections frequently introduced into the urethra or vagina, as the case may be. To control the inflam-

matory symptoms after the purge, aconite or veratrum should be given, until the active inflammation is subdued. After which, if the disease is not subdued, specific medication should be given as follows :

R.—Solidified copaiba, ... ʒj.
 Ext. horse radish, ... gr. xxx.
 Nitrate potassa, ... gr. xx.
 Gelsemin, ... gr. ij.

Mix, and make thirty pills. Dose, one every three hours. At the same time the penis or vagina should be injected three or four times a day with the following emulsion :

R.—Gum Arabic, ... ʒij.
 Water, ... ʒvj.
 Sulphur and sugar of lead, ... āā. gr. xxx.

Mix, and use for injections three or four times a day.

The following compound has frequently been used to a good advantage.

R.—Balsam copaiba, ... ʒj.
 Sweet spirits of nitre, ... ʒij.
 Oil of cubebs, ... ʒj.
 Emulsion of gum Arabic, ... ʒij.

Mix. Dose, tablespoonful four or five times a day.

Where the disease assumes a chronic form, take compound syrup of ehimaphilin, six ounces, and iodide of potassa, two drachms. Mix, and give one tablespoonful three times a day.

The following compound has been very highly extolled as a specific in gonorrhœa.

R.—White wax, ... ʒj.
 Solidified copaiba, ... ʒij.
 White pine gum, ... ʒss.

Melt, and form a paste. While it is cooling, add oil of juniper and cubebs, ʒj. Dose, a pill the size of a pea every two hours. For other compounds, see Formulary. Where the discharge is profuse, equal parts of hydrastin and tannin as an injection, three or four times a day, will be found of

much value. Where there is chordee, small doses of camphor and gelsemin, will control that symptom. During the entire treatment, the bowels should be frequently opened with mild purges of podophyllin and cream of tartar. The diet should consist entirely of vegetables, and all spirituous and stimulating drinks should be carefully avoided.

SYPHILIS.

Syphilis, like gonorrhœa, is a disease which arises from sexual intercourse, and is transmitted through the medium of the secretions. It may also be transmitted from parent to child. It has been divided into different stages, as local or primary, secondary and tertiary.

SYMPTOMS.

The first symptom of syphilis is the appearance of a chancre, generally, on the genital organs. It usually commences with a little pustule, with a small blister on the apex, which breaks in a few days, and leaves a red abraded surface beneath. The sore, which is at first small, gradually increases in size to a deep rigid-looking ulcer, presenting a great variety of appearances in different cases. It has also received different names according to its appearance. Thus it is called simple chancre, when its edges are smooth, indurated or Hunterian, when its edges are indurated, the phagedænic, or sloughing chancre, when its edges are ragged and sloughing. There may be one chancre, or there may be a great number. They may be confined to the genital organs, or they may extend to all portions of the body, especially to the nose and throat. In the first instance, unless syphilis is hereditary, it is purely a local affection; but if allowed to remain for any considerable length of time the matter becomes absorbed, and secondary or constitutional symptoms appear. This is indicated by buboes or enlargements of the inguinal glands, which present a blue and hard appearance. A large num-

ber of copper-coloured spots also appear on the surface. If the disease is not removed, it speedily passes into the tertiary stage, and large indolent ulcers appear upon different parts of the body. The bones become affected, and the miserable patient dies a victim to his own folly. The limits of this work will not allow a further description of this disease: hence the reader is referred to a treatise especially devoted to this subject.

TREATMENT.

In primary syphilis, but little more is necessary than effectually to destroy the chancre and to heal the parts by means of mild dressings. To prevent secondary symptoms, much care should be taken with reference to the kind of caustics. The common practice is to use nitrate of silver. Hence the large per cent. of secondary symptoms consecutive upon primary—nitrate of silver forms an eschar, without entirely destroying the virus, and thus the poisonous matter is absorbed and carried through the system, causing secondary effects.

The pure stick caustic of potassa, is the best for this. It should be applied sufficiently thorough to destroy every vestige of the unhealthy portion of the chancre. After which a flax-seed poultice should be applied, and allowed to remain until all portions of the destroyed tissue are sloughed out. It should then be dressed with mild zinc ointment, until it is entirely healed.

During the treatment the patient should abstain from all fat meats, spirituous liquors, and excesses of every kind. A purge of podophyllin and cream of tartar should be given every twenty-four hours.

If the disease is absolutely in its primary stage, the above course of treatment will effect a cure in a few days.

TREATMENT FOR CONSTITUTIONAL OR SECONDARY SYPHILIS.

The treatment for secondary syphilis is both specific and general.

The general treatment consists in regulating the bowels with mild purges, bathing the surface with alkaline baths, abstinence from stimulating food and drinks, and the observance of rest.

The specific treatment consists in the use of such remedies as exert a specific influence over the disease.

The following remedies may be used to act specifically in secondary syphilis:—*phytolaccin*, *iridin*, *iodide of potassa*, *serofularin*, *corydalin*, *chimaphilin*. The tinct. of *kalmia latifolia*, or mountain laurel, *citrate of iron*, *potassa*, *bromide of potassa*, *quinine*, *iron*, *creasote*, *hydrocyanic acid*, *menispermum*, *muriate of ammonia*, *ceanothus Americanus*, &c. In the commencement of treatment, the patient should take a thorough *lobelia* and *blood root* emetic, followed by an active purge of *podophyllin*, *cream of tartar*, and *sulphur*.

R.—*Podophyllin*, gr. ij.
Cream of tartar, gr. xxx.
Sulphur, gr. xx.

Triturate, mix and divide into five powders. Dose, one every two hours until it operates as a purge. Afterwards give the patient a thorough spirit sweat, followed by an alkaline bath. When the system has been thus prepared, one or more of the specific remedies should be given.

R.—*Compound syrup of stillingia*, Oj.
Iodide of potassa, ℥j.
Phytolaccin, ℥ss.

Triturate the *iodide of potassa* and *phytolaccin* in two ounces of *glycerine*, then add the syrup, and let the patient take one teaspoonful four or five times a day. After this remedy has been used for one or two weeks, it may be omitted, and the following may be used in its place.

R.—Quinine,..... gr. xxx.
 Citrate of iron, gr. xxv.

Mix, divide into ten powders, and let one be taken three times a day, in connexion with five or ten drops of the tinct. of kalmia. These remedies may be followed by eorydalin, chimaphilin, and citrate of iron.

If there is fine mercurial erythema, as is often the case in syphilis, the serofularin will remove it. If there are chancre or syphilitic ulcers, they should be cauterized with citric acid, and dressed with mild zinc ointment and elm poultices. During the treatment the patient should retire from business, and observe perfect rest. The diet should be mostly vegetable and cooling. When the prominent symptoms have disappeared, a more liberal diet may be allowed. The surface should be frequently sponged, and the bowels kept open.

In the tertiary form of syphilis, the treatment does not differ essentially from the above, except that the diet should be more nutritious, and the medication less active.

Where buboes appear, they may be dressed with the following:—

R.—Tincture of iodine, ʒij.
 Tincture of arnica, ʒj.
 Tincture of serofularin, ʒij.

Mix, and apply by wetting pads of linen, which may be secured by means of adhesive straps. If this does not discuss them, they should be caused to suppurate by means of warm elm poultices, and healed by means of mild zinc ointment. Where the bones have become affected, in addition to the above remedy, phosphate of lime should be frequently used in connexion with quinine. Where the patient has been mal-treated with mercury, &c., dilute sulphuric and nitro-muriatic acid will be found valuable in connexion with comp. syrup of stillingia.

I have cured several cases of the tertiary form of syphilis, that had been mercurialized until it was difficult to decide

whether the mercurial or syphilitic affection was most prominent.

R.—Nitro-muriatic acid,..... ℥j.
Water,..... ℥vj.

Give forty drops in one teaspoonful of comp. syrup of stilingia, three or four times a day. In cases where all other remedies had failed, I have used the following compound, with the most salutary effect:—

R.—Simple syrup, ℥vj.
Creasote, gutt. iij.
Hydrocyanic acid,..... gutt. xvj.

Mix thoroughly, and give one drachm or one teaspoonful three times a day.

The strength of the system should be well supported by a generous diet, exercise in the open air, and baths taken every day.

GANGRENE AND MORTIFICATION.

Gangrene and mortification may arise from a variety of causes, such as intense inflammation, arrest of circulation, severe contusions, compression, certain specific poisons, etc. Gangrene may also occur spontaneously in old people, when it is called *senile*, and is usually owing to a disease of the coats of the arteries. Fig. 11, represents this kind of gangrene.

SYMPTOMS.

The symptoms of gangrene and mortification are both local and constitutional. The local symptoms are death of the part followed by sloughing and deep ulceration, unless it be dry gangrene, represented in the Fig., which dries and becomes very hard. The constitutional symptoms depend much upon the extent and nature of the gangrene. If it be dependent upon active inflammation, and great debility of the parts, there will be feeble vitality, loss of appetite, great prostration, and if the gangrene be internal, there will be

hiccup, vomiting, cold sweat, and death. But where the disease is confined to the outer portions of the body, they correspond with the extent of the injury.



Fig. 11.

TREATMENT.

Where there is a tendency to gangrene in any of the internal organs, quinine, capsicum, baptisin, yeast, and other stimulants and antiseptics, should be given in such quantities as are necessary to maintain the vitality of the parts. In external gangrene, poultices, made of pulverized indigo weed, sweet fern, Peruvian bark, slippery elm and yeast, should be applied, and changed every hour or two. If this does not arrest the gangrene, wet the poultice with the following lotion:

℞.—Best French brandy,..... Oj.
Sulphate of zinc,..... ℥j.

Dissolve the zinc in two ounces of water and add to the brandy, also, add two ounces of pyroligneous acid, and keep the poultice wet.

Tonics and anodynes should be administered internally. The following pill I have used to good advantage.

R.—Pulv. myrrh and capsicum, āā gr. xxx.

Prunin and baptisin, āā gr. xx.

Ex. garden lettuce, ʒj.

Mix, and form fifteen pills; give from three to five per day. Give the tonic wine bitters, one half wine glass full, three times a day, and if the arteries be affected as in *senile* gangrene, small doses of iodide of potassium, in connexion with Beach's alterative syrup, will be found beneficial. The diet should be as nutritious as the patient can bear, and the bowels should be kept regular by means of mild laxatives.

BURNS AND SCALDS.

The treatment of different cases must be varied. For a simple superficial burn, involving the cuticle alone, almost any remedy will be attended with a successful result, so that one will have a high opinion of cold water, another of warm, another of turpentine, another of compound tincture of myrrh and capsicum, according as each has applied this or that remedy. In the vesicating burns, the roughened cuticle should be carefully handled, and applications should be more cautiously applied and removed, lest the cuticle be detached, and the surface beneath be exposed to the air. In case there are little blebs, these should be punctured with a needle or lancet, great care being observed to prevent the ingress of air to the surface of the burn beneath the cuticle. Any application that excludes the air, and is emollient, and tends to maintain a comfortable and equal temperature will fulfil the indications of treatment. For this purpose, the flour of slippery elm dusted over the surface, or warm linen cloths, wet in warm mucilage of elm, or a thin layer of soft carded cotton, moistened with diluted whisky, and held by a few turns of the roller, will be useful. The warm packs of mucilage of elm are beneficial, but that application which excludes the air the most completely and with the least irritation to the part is best. If the burn sloughs, a plaster of

slippery elm should be applied until the slough is removed; if there is fungous flesh, this may be removed by the use of pulverized sanguinaria, the extract of phytolaccin, or caustic potassa. Dr. W. Beach recommends a poultice of slippery elm and milk, spread on linen or muslin covered with sweet oil. When used, this should be covered with oiled silk to prevent evaporation. After this the black salve.

A salve which I have found efficacious, is made of the following articles:—*R.* Brown diachylon, lb. ss., rosin, $\frac{3}{4}$ iv., bees wax, $\frac{3}{4}$ iv., Venice turpentine, $\frac{3}{4}$ j. Melt well together, and spread on linen cloth, and apply.

Several other topical applications have been recommended. Starch either wet or dry is often used. Acetate of lead is recommended by some, but it has no advantages over the extract of quercus alba, the geranium maculatum, or the statice limonium. A solution of borax is mentioned. For a stimulating application, Dr. B. F. Hill recommends:—*R.* Spirits of camphor and tincture of opium, āā $\frac{3}{4}$ ss., spirits of turpentine and tincture of capsicum, āā $\frac{3}{4}$ j, olive oil, $\frac{3}{4}$ iij. This preparation is most useful after the inflammatory stage has passed away. It should be applied once or twice a day, and may be covered with a poultice of slippery elm.

Rum and molasses is another remedy recommended by the people of the south. These substances should be intimately mixed and applied on linen, or by saturating raw cotton, or it may be applied to the surface by means of a brush, over which is placed oiled silk or a poultice. Prof. Gross recommends a mixture of linseed oil and carbonate of lead, to be applied with a swab. These various remedies are referred to in order to show the various opinions of medical men. Nothing can better fulfil the indications than the flour of slippery elm made into a paste with milk or cream, wet in warm, tepid or cold water according to the indications of the case. The constitutional treatment should be such in the stage of prostration as will favour re-action. Carb. ammo-

nia, capsicum, wine whey,—and in cases where deglutition is lost, injections of the compound tincture of lobelia and capsicum, with brandy, should be administered. A small quantity of the same medicine in the mouth will tend, by its stimulating effect, to excite deglutition. If the respiration is deficient, a sudden shock to the system by water sprinkled on the bare breast will assist much in the restoration of consciousness. Galvanism would likewise tend to accomplish the same object. As soon as the deglutition and respiration are established, if the patient still remains weak, the brandy and egg mixture should be given. Thomson's composition tea, prepared by boiling one teaspoonful of the powder in one pint of water, a gill of milk, and tablespoonful of white sugar, drunk freely, will tend to establish re-action and nourish the system. If re-action is great, and the symptomatic fever excessive, it should be controlled by aconite. The warm, wet sheet may be beneficially applied when cutaneous heat is excessive. In these cases care should be taken to properly nourish the system, for when a large part of the cutaneous surface of the body has been destroyed, the excretions are not removed from the blood so readily, and there is at the same time a great demand for fibrin, with which to repair the injured tissues. The result of this is often the production of typhoid symptoms, delirium with subsultus. At this time the surgeon might be unable to decide whether to permit the patient to take the egg and brandy mixture, or beef-steak, with a view to supply material, out of which the system can manufacture fibrin, or to administer aconite and other antiphlogistics to reduce the fever.

Prof. Calvin Newton in his lectures used to relate a case of this kind. A young man had been severely burned, destroying nearly half of the skin of the body. By proper stimulation, re-action was restored, and the healing process went rapidly on for several days. At length typhoid symptoms suddenly appeared, and counsel was called. The ques-

tion was, whether the typhoid state arose from deficient nutrition with which to supply healing material, or from some other cause. Dr. Newton thought it best to give beef-steak, rather than medicine. This was supplied, and the next day the typhoid symptoms all disappeared, and the healing process again commenced. In common allopathic practice, the course pursued is such as to destroy too much of the nutrition of the blood,—there is so much fear of fever and inflammation, that the system does not receive a proper supply of material for repairing the lesions, and the consequence is, that the patient sinks with adynamic fever. When much tissue is destroyed, the remaining healthy skin has an increased labour to perform in depurating the blood,—consequently diaphoresis should be favoured, and likewise diuresis, stimulated so as to prevent the accumulation in the blood of disintegrated tissue. To accomplish these indications, laxatives, leptandrin and euonymin will be necessary to open the bowels, eleavers, eupurpurin and marsh mallow to excite the kidneys, and aselepin, capsicum, or the warm bath, to promote diaphoresis. When there are cerebral symptoms, these should be met with the appropriate remedies.

Scalds of the mouth, pharynx and glottis, then occasionally occur from the drinking of hot water, or the inhalation of vapour or flame. The scald produces inflammation of the mouth and fauces, which may produce, by extending to the glottis, suffocation and death. The inside of the mouth appears white and scalded, the patient complains of great pain, and difficulty of breathing follows, which, if not relieved, may terminate in death.

The treatment should be both local and constitutional. Cool gargles of mucilage of gum acacia, or slippery elm, or flax-seed tea should be used, and a warm and relaxing poultice should be applied to the neck, and a wet compress covered with oiled silk, to prevent evaporation. If fever arises, aconite should be given in mucilage once in two or

three hours; the bowels should be opened by means of injections, and if the inflammation is very severe, enemata containing a teaspoonful of tincture of lobelia, to produce diaphoresis, should be given. When it is necessary to open the bowels, jalapin and cream of tartar in mucilage will form a useful compound, the quantity being adapted to the age of the patient. The operation of laryngotomy or tracheotomy may be necessary in case of œdema of the glottis arising from inflammation. But if the treatment above recommended is perseveringly applied, and the constitutional symptoms subdued at the onset, the operation will seldom be needed, and even when resorted to, its success is exceedingly unfavourable, and its performance often difficult on account of the shortness of the neck and the small size of the trachea.

ULCERS.

An ulcer is defined by Liston, to be a solution of continuity, accompanied by the secretion of pus, or other fluid. He makes six varieties, viz.:

1. The simple, healthy, or healing ulcer.
2. The weak or sluggish ulcer.
3. The indolent.
4. The irritable.
5. The specific.
6. The varicose.

These varieties are not dependent merely upon local causes, but are much modified by the condition of the constitution. The character of an ulcer is an indication of the state of the general system. The characteristics of simple, or healthy ulcer, are a circular or oval surface, slightly depressed, studded with granulations, secreting pus, and presenting a tendency to heal. The prognosis in this variety is favourable, and the treatment is simple, consisting of water-dressings, and slight pressure with adhesive strips, or a bandage. The indications are to maintain the strength of the system and

to remove all local causes of irritation, such as the contact of air, or the friction of clothing. The black salve of Doctor Beach forms a good application. The ulcer should be cleansed with warm Castile soap suds, and cold applications rarely applied. In the application of adhesive strips, or a bandage, care should be taken to give a place of exit for accumulating pus.

The weak or sluggish ulcer occasionally occurs, and is frequently caused by the continued application of emollient poultices. The granulations are semi-transparent, high and flabby, rising in large, exuberant, gelatinous, reddish-looking masses, above the surface of the ulcer. The granulations readily slough, having but a feeble vitality.

The treatment of this variety should consist of constitutional means to invigorate the system, tonics, stimulants, and nourishing diet, and of the local application of astringent and stimulating compounds, such as the tincture of myrrh, capsicum and geranium. An occasional ablution of the part in a solution of sesqui-carbonate of potassa, or extract of white oak bark, will be found beneficial, or sprinkling it with finely pulverized sanguinaria or alum, will be of service. Doctor Erichsen highly recommends the following formula:—sul. zinc, grs. xvi.; comp. tinct. of lavender, and spirits of rosemary, aa. ℥ii. Water, ℥viii., as an astringent application. The limb or part should be elevated, and gentle pressure should be made by means of a roller or adhesive strips. These should be placed so as to leave a space between them for the escape of pus, and over them, lint, covered with cerate, and retained by a bandage. The water-dressing is sometimes used, consisting in the application of a piece of patent lint, of the size of the ulcer, dipped in tepid or cool water, to the part, and covering this with a piece of oiled silk, somewhat larger, and bound down by a roller.

The indolent ulcer is deep and excavated, covered with irregular and imperfectly formed granulations, which exude a

sanious pus. The edges are hard, irregular and rugged. The tissues adjacent, are congested, and firmly adherent to the subjacent fascia. The sensibility of the part is diminished, and pain is seldom troublesome. This variety is caused by feeble capillary circulation, which may arise from a local or a constitutional cause. It most frequently occurs in men about the middle period of life, and is usually located in the lower extremities in the lower third of the leg, just above the ankle.

The treatment should be such as will tend to depress the edge, and elevate the base of the sore. The means of effecting this, are stimulation and pressure. For a stimulant a poultice of slippery elm sprinkled with pulverized myrrh and capsicum will be useful. In many cases, however, this will not be sufficient, and it will be necessary to destroy the diseased edges at once, by nitric acid, or potassa fusa, or sulphate of zinc, and afterward cover the part with a poultice of slippery elm, keeping the limb elevated, and sustaining the strength of the patient. Prof. R. S. Newton, of Cincinnati, uses the following formula:—*R.* Pul. sulphate zinc, ʒij., pulv. hydrastis, ʒj., pulv. podophyllum peltatum, ʒss. Mix, fill the cavity of the ulcer with this, and let it remain as long as can be well borne, or until it has destroyed the dead tissue, then apply slippery elm, wash in cold water, until the part sloughs. Then apply the lead plaster, or Beach's black salve, or the emplastrum saponis. This treatment, conjoined with proper constitutional remedies, general tonics and stimulants and rest, will usually effect a cure. The application of pressure, however, will often be necessary in cases that cannot be well subjected to the treatment described. Before this is applied, the limb adjacent to the ulcer should be stimulated with the application of the comp. tinct. of myrrh and capsicum, and elevated, and steamed over medicated vapour; then the ulcer should be filled with the sesqui-carbonate of potassa, letting it remain for some hours; then wash the

ulcer with a weak solution of tincture of capsicum, say $\mathfrak{z}\text{i}$. to $\mathfrak{z}\text{i}$. rain water. Then the emplastrum saponis should be spread on calico, which should be cut into strips sixteen to eighteen inches in length, and an inch and a half in width. The centre of the strip should be smoothly laid on the side of the limb opposite to the sore, and its ends are to be brought round the limb, and crossed obliquely over the ulcer. A sufficient number should be applied to cover the sore and the limb for two inches above and below the ulcer. Each strip should overlap about one third of the adjacent one, and all should be evenly and equally adjusted, so as to make equal pressure upon all parts of the diseased limb. A roller should then be applied to the limb, from the toes to the knee. The lead plaster may be used as a substitute, or the adhesive, or emplastrum resinæ, although this is thought by most surgeons to be more irritating to the ulcer. The application of these strips should be renewed every forty-eight hours, and, if the discharge is considerable, holes should be made in the strips for the escape of pus.

The inspissated juice, evaporated to a salve of the *phytolacca decandra* leaves, forms a valuable remedy for producing a slough. Likewise that of the *rumex crispus* and of the *sanguinaria canadensis*. These should be applied on linen cloths, until there is a line of demarkation between the diseased and healthy tissue. The ulcer may afterwards be healed by means of the black salve. Pressure may be made upon these ulcers by means of collodion. It should be applied so as to form a thick impervious covering; its contraction by means of the evaporation of the ether produces a degree of pressure that is many times highly beneficial.

The irritable ulcer is most often found in females of a nervous and bilious temperament, about the middle period of life. It is usually situated about the ankle or shin, and is small in size. Its edges are not elevated, but are irregular, the surface is grayish, covered with a thin layer, and dis-

charging a thin sanious secretion. It is quite painful, preventing sleep, and thus injuring the general health. The treatment should first be constitutional. The alcoholic vapour bath should be used twice a week, and if the stomach is inactive and digestion impaired, an emetic of lobelia will prove highly beneficial. This should be followed by the administration of tonics and stimulants, the hydrastin, and xanthoxilin, and euonymin, are valuable remedies for this purpose. If there is evident anæmia, iron should be administered. If the ulcer appears during lactation, especial care will be required in order to sustain the system by nutritious diet, tonics, and porter, or ale. The compound syrup of stillingia, or Beach's anti-mercurial syrup with the muriatic tincture of iron will be highly serviceable. Especial attention should be given to restoring the secretions of the skin and kidneys, by baths, and mild diuretics. It is impossible to cure these cases unless the excretions are properly restored, and the organs of circulation properly stimulated. Pure air, good food, and cleanliness, are very important means of cure. Rest at night should be procured by hyoseyamin, scutellarin, and cypripedin either separately or alone. These are preferable to opiates, inasmuch as they do not arrest the secretions.

To allay pain and irritability, a poultice made of equal parts of pulverized lobelia herb and slippery elm, with laudanum will be useful, or the application of a thin plaster made by spreading the inspissated extract of conium on soft linen, and applied, will relieve the symptoms. Sometimes dry applications will be better than moist. These should consist of flour, or finely pulverized chalk, or the powder of the *lycopodon bovista*. But when the ulcer resists all these means it should be washed in a strong solution of nitrate of silver, followed by some sedative, and emollient application. It may be necessary in some cases to entirely destroy by means of the chloride or sulphate of zinc, the ul-

cerating surface, and then to apply a poultice of ulmus and pulverized myrrh, to favour the healing process, followed by the use of the black salve of the Eclectic Dispensatory. When the granulations are spongy, and discharging watery fluid, it may be necessary to apply an astringent compound, for which purpose the extract of quercus is admirably adapted. Dusting the surface with very finely pulverized nut galls will likewise be beneficial.

The inflamed ulcer is sometimes spoken of by authors, though not mentioned in Liston's classification. It is characterized by symptoms of inflammation, redness, swelling, pain and heat. The discharge is often thick, and offensive, and bloody. The treatment should consist of cold applications, the elevated position of the part, and the use of poultices of ulmus, wet with cold water and frequently changed so as to keep down the heat. At the same time the patient, if there are symptoms of constitutional excitement, should take aconite and veratrin internally, an occasional warm bath, a cathartic of the fluid extract of senna and jalap, or of some other effectual purgative. After the local symptoms are reduced, the constitutional and local treatment that is recommended for other varieties of ulcers will be appropriate.

The sloughing ulcer is another variety not included in Liston's classification. It is described as having a great tendency to spread, a dusky red blush forms around the sore, the edges are sharp cut, the surface is grayish, and is attended with irritative fever. This is usually found in persons of a cachectic constitution, and is allied to gangrene, the vitality of the part and the constitution being much reduced. The treatment should consist of a nourishing diet, the use of quinine and iron, hydrastin and other vegetable tonics should be given freely; and when the constitutional powers are greatly reduced the strongest diffusible stimulants should be used, capsicum, xanthoxylum and carbonate of ammonia. The brandy and egg mixture of the

Eclectic Dispensatory will be excellent. The local applications should be such as will cause a slough. Sulphate of zinc, and the chloride should be applied on lint, followed with slippery elm and charcoal poultices if the tendency to gangrene is marked. The carrot and spikenard poultice will likewise answer a good purpose.

The specific ulcer has characteristics dependent upon its cause, which may be scrofula, fungus, or syphilis. The particulars of each should be described under the heads of their respective causes.

The varicose ulcer takes its name from its cause, which is a varicose condition of the veins in the circumjacent tissues. The skin gradually undergoes degeneration, becomes of a brownish or purple colour, and the veins in the part become enlarged and tortuous. Near to one of these congested spots the ulcer forms by breaking down of the softened, and partially disintegrated tissue, forming a sore in which the surface is sometimes irritable, sloughing or indolent. In case the ulcer penetrates one of the tortuous veins, it gives rise to hemorrhage, which sometimes proves alarming. The recumbent posture, elevating the limb, and compression of the part by lint and rollers will speedily arrest the hemorrhage. The causes of this condition of the veins are various. Phlebitis by destroying the valves will produce it. Pressure upon the ascending cava—or upon the femoral or saphenous veins, or a want of tonicity in the parietes of the veins on account of general debility—all these frequently are the direct causes. Treatment:—The indications are to remove the cause if possible. The general circulation should be stimulated, the liver should be excited, if portal congestion is the cause. The heart should receive attention if it be diseased. Capillary circulation throughout the body should be increased by baths, and stimulants and tonics. To the affected part, astringents and pressure should be applied. The limb should be elevated—and a strong solution of extract of

quercus mixed with French brandy used for a wash. The patient should wear a bandage applied from the toes to the knee, or even above, if the veins are distended. An elastic, laced stocking will accomplish the same object. In difficult cases some surgeons recommend passing a ligature under the vein adjacent to the ulcer, then tying it so as to cause it to slough. Care should be taken in performing this operation not to pierce the vein. The same object may be attained by means of the application of caustic to the vein, thus causing an eschar and slough, by which the vessel is occluded. Other remedies may be beneficially used to increase capillary circulation in the parts. Tincture of myrrh and capsicin, kino, catechu, marsh rosemary, and the various astringent remedies will fulfil this indication. The tannic and gallic acids containing the essential elements of astringents can be beneficially used in solution as directed by the Eclectic Dispensatory.

The hemorrhagic ulcer is a sub-variety, known by a dark purple sore, occurring in females, from amenorrhœa, and consequently tending to bleed most at the menstrual periods, or at those times at which the female should menstruate. Its cause being constitutional, the treatment should consist of the use of tonics, and stimulants. Xanthoxylin, macrotin, oil savin, sulphate iron, caulophyllin, with hip-baths, and nourishing diet, and occasional purges, containing a portion of aloes, will be effectual in restoring the catamenia. The local treatment is comparatively unimportant, and should generally be the same as that recommended for the irritable ulcer. The general principles in the treatment of ulcers of every variety are to restore the action of the organs of digestion and assimilation, and the circulation of the blood, so that their treatment should be constitutional to a great extent. Nothing can be of permanent benefit unless the general system is in a proper condition to furnish the healing material. The local treatment is such as will aid nature in

hastening on the formation of a slough, and enabling the system to cure the ulcer quicker than it would do unaided. Undoubtedly, by means of rest, the elevated position, and proper diet, and the judicious use of water-dressing, the majority of ulcers can be cured; and, indeed, in many cases these are almost the only means that can be brought to bear upon patients on account of prejudice, or want of faith in medicines. Dr. Chapman of London speaks very favourably of these water-dressings, which are valuable when the surgeon can be in constant attendance, and have the entire control of the patient. But unfortunately this is seldom the case in general practice, and it therefore becomes all the more necessary to use medicines and other means not hydropathic, in their treatment. When scrofula complicates the ulcer—the *ampelopsin*—*scrofularia marilandica*, *phytolaccin*, and the iodide of potassium, and compound syrup of *stillingia*, will be the best remedies. If the ulcer arises from syphilis, the treatment should consist of the use of *stillingia*, iodide of potassium, *phytolaccin*, and *iridin*, with a generous diet. The muriated tincture of iron will then form a useful local application.

AMPUTATION.

Amputation, the last resource and effort of surgery, ought never to be practised, but in despair of other remedies. It is of a doubly serious nature, inasmuch as it endangers life and mutilates the body. Even when amputation seems necessary, the skilful practitioner will never forget that the end of surgery is to preserve, not to destroy; and that he will be entitled to greater credit for preserving one limb, than he would for making, with all imaginable address, a great number of amputations; on the other hand, it is better to sacrifice one part, than to lose the whole—to live with three members than to die with four.

Cases which require amputation, merit particular attention,

and will be, it is to be hoped, less and less numerous as medical knowledge advances, and as the just treatment of diseases comes to be more generally understood.

MORTIFICATION.

The only circumstance which was formerly supposed to justify the amputation of a limb, is not now the cause which most frequently renders the operation requisite, although it must be confessed that it forms one of the most positive indications. Amputation in this case is only warranted when mortification has invaded the whole thickness of the part, or at least when it is sufficiently deep to leave no hope of preserving its principal elements. With regard to amputation, gangrene involves a part which some moderns have attempted to solve differently from the ancients. Patt, and before him, Sharp, strenuously maintained the necessity of waiting until the organization had arrested the progress of mortification, and established its limits, before thinking of amputation; without attention to this particular, say they, (and the majority of surgeons agree with them in opinion,) the mortification will affect the stump, continue to propagate itself in the direction of the trunk, and will only be arrested by the death of the patient, while the surgeon will have performed to no purpose, a most painful operation. This manner of viewing the matter, founded upon an exact observation of facts, ought to be adopted as a general rule, but not as an absolute rule.

Messrs. Larrey, Yvan, Lawrence, Dupuytren, Gourand, Guthrie, and Chaussier, who, while justifying the conduct of M. Labesse of Nancy, in a case of this kind, have admirably established the distinction necessary to be made. Messrs. Macdermott and Busch, who have reported several observations on this point, and many other surgeons, have proved that it is sometimes prudent to pursue an opposite course of conduct, and to practise amputation before gangrene has be-

come limited. For example, when a traumatic injury is the cause of mortification; when it proceeds from the rupture of an artery, or the division of the brain, or the principal part of the member, or from the mechanical compression; when in fact it does not seem to result from a constitutional affection, from any external or hidden cause; it is difficult to see what real advantages can result from temporizing. Gangrene ought here to be considered as a cause of gangrene, and as soon as that is well established, the patient cannot but be a gainer in being relieved as speedily as possible from the presence of the mortified parts. If gangrene, on the contrary, proceeds from the spontaneous obliteration of the artery or principal vein of the membrane, as is frequently the case, then, indeed, it is evident that amputation will not keep it from spreading. The success of the operation would then still be a matter of chance. The object of the practitioner might be accomplished if the knife fell above the obliterated part, but the reverse would be the case if it did not. In such a conjuncture prudence requires one to pause, so that senile gangrene, which comes under this head, will not, even if the general state of the patient do not exclude the idea of amputation, permit us to resort to it until the disease has paused in its ravages, and its limits have been marked by an inflammatory line. The point then is to distinguish these two cases from each other.

Caries, Necrosis.—The last remedy of caries and *necrosis*, whether of the middle part or of the articular extremity of the bones, is also amputation. To justify its use, however, the disease should be extensive; have existed for a considerable time; have caused great suffering, or an exhausting suppuration; should occupy an articulation and an extended surface, or be surrounded by fistulous openings and deep degeneration of the soft parts; the bone should be affected throughout its whole thickness, if in the continuity of the limbs; and reproduction through the vessels of the perios-

teum cannot be counted on. It should also in such cases be remembered that the organization is very powerful, and that the surgical art actually possesses the means of partially removing the bone without removing the limb, when the soft parts are in a state to be preserved.

GUN-SHOT WOUNDS.

No wounds so frequently call for amputation as those which are inflicted by fire arms. Not that the projectiles impelled by gunpowder, have in themselves any venomous property, as has been believed by some surgeons since the time of A. Ferri, and as is still imagined by the vulgar; but because they break, tear, and bruise the tissues which they penetrate or strike. A bullet, a grenade, or a portion of a bomb, which carries away a portion of the thickness of a limb, comprising the vessels, demands amputation; while the same wound produced by a cutting instrument, might perhaps be cured without thus mutilating the patient. If such an agent strike the body of the arm or thigh in such a manner as to reduce the muscles to a jelly, but without affecting either the skin or the bones, it is still necessary to amputate, excepting in cases where the attrition is very limited, and the vascular and nervous trunks have escaped.

COUNTER-INDICATIONS.

To justify an amputation, it is not sufficient that the disease which requires it cannot be cured by any other means; it is also necessary that the operation should promise entirely to remove it, and leave a reasonable chance of preserving the life of the subject. When the operation is performed for a cancerous affection, the operator should assure himself that no germ of the disease exists in the viscera. If degenerated lymphatic ganglions are remarked at the root of the limbs; if the colour of the skin, the state of the respiration, or of the digestion, or any, the least symptom indi-

cates that the affection is not confined to the exterior, amputation will be useless, and will only tend to hasten the development in more dangerous situations, of diseases analogous to those which it is intended to cure. The same remarks apply to pulmonary phthisis, to the necrosis and caries of the vertebral column; to abscesses by congestion, the source of which cannot be stopped; to any organic injury of the heart, of the liver, of the stomach, of the genito-urinary passage, &c., to extreme exhaustion; to old and numerous ulcerations of the intestines, combined or not with a colliquative diarrhœa; in fact, to all those occasions when after the removal of the limb, a disorder is left in the organization sufficiently serious to produce death.

OPERATION.

Amputation may be performed in two ways, with nearly the same facility. One method is called the circular, the other the flap.

The circular operation consists in first fixing the tourniquet on the main artery, a considerable distance from the place of operation, sufficiently tight to entirely interrupt the circulation. After which, if the arm is the limb to be operated upon, as represented in fig. 12, the patient should either be placed on a table, or seated on a chair, one assistant supporting the arm, while another grasps it with both hands, and forces the integument back as far as possible. The surgeon at the same time passes his hand and knife under the arm, as represented in the figure, bringing his knife completely over the arm, and by commencing to cut with the hilt, it should be firmly brought around to the point from which it started, separating the integument and superficial fascia, after which a small scalpel should be used to loosen the skin and fascia upon the arm for two or three inches, and by means of a split bandage, the integument should be retracted as far as possible. This is done for the

purpose of leaving a good stump. A second incision should now be made as far up as the skin is retracted, separating all the soft tissues to the bone. The muscles are now sepa-



Fig. 12.

rated from the bone by a scalpel, and held back by a strip of strong muslin, (called a retractor,) slit so as to pass on each side of the arm. The covering of the bone or periosteum is next divided by a circular sweep around it with a small knife. The next step is to saw off the bone, which should be done with much care, so as not to fracture or shiver any portion of it. When this is done, all the sharp edges should be trimmed off with a pair of bone forceps. The brachial artery should then be tied, and the tourniquet removed. All the small arteries which are now observed to

bleed, should be well secured with the ligature. When the arteries are all tied, and the veins have stopped bleeding, the stump should be thoroughly cleansed with cold water, and the flap brought together in an exact horizontal line across the middle of the stump, and fastened by means of adhesive strips, four or five inches in length, and one half inch wide. The stump should then be covered with lint, and secured by a bandage tightly applied, and kept wet with cold water. When the ligatures are applied to the artery, they should be tied in what is called a surgeon's knot, with ends of sufficient length to hang beyond the edge of the wound. The



Fig. 13.

dressing should be carefully removed every two or three days, but no attempt should be made to remove the ligatures under

eight or ten days, and it should not be done then, unless it can be effected by very gentle pulling.

In the flap operation, as shown in fig. 13,

The knife is thrust into the limb at the point where amputation is to be made, until it reaches the bone, and then by a gentle rotary motion it is passed back of the bone, so as to make the posterior flap first. The incision is now made downward and outward, so that the knife will emerge from one and a half to four or five inches from the point of insertion. The knife is again introduced at the point where it first entered, making an incision forwards and upwards, so as to form a flap corresponding with the first. The flaps should now be brought back, the periosteum separated, the bone divided, and the operation completed as directed in the circular operation.

* *Amputation of the leg* may be performed in two situations, according to the seat of the disease, and the position of the patient in life. In those individuals who can afford a well constructed artificial limb, and in whom the disease will admit of it, the amputation may be performed in the lower part of the leg. In those on the other hand, who will be obliged to wear a common wooden pin, a long leg stump would be highly inconvenient and much in the way; and here the operation usually leaves the best result, if performed just below the tuberosity of the tibia. If, however, the disease be confined to the ankle, amputation, even among the poorer classes, may be advantageously done below the calf; the patient afterwards wearing a short wooden pin, in the socket of which the stump is fixed in the extended position, as recommended by Fergusson.

The flap operation of the leg may be performed in the following way. The tourniquet having been applied to the artery in the popliteal space, the assistant, whose duty it is

to retract the flap, takes his stand in this, as in all amputations of the lower extremities, opposite to the surgeon. In the left limb the knife is entered at the posterior edge of the tibia, carried forwards for a distance of one and a half inches, then across the anterior part of the leg to the posterior border of the fibula, up which the incision is made to extend to a corresponding distance; on the right leg the incision commences on the fibular side of the limb, and terminates on the tibial.

The flap thus formed, which should be broad and well rounded, is next dissected up by a few touches of the point of the knife, and transfixion of the limb made by passing the blade across behind the bones from one angle of the incision to the other. The posterior flap is then formed by cutting obliquely, downwards and backwards, and should be about three inches long. The bones are next cleared by a double sweep of the knife, and the interosseous soft parts divided by carrying the instrument in a figure of eight way, between the bones. In doing this, especial care must be taken not to direct the edge upwards, so as to split either of the tibial arteries, more particularly the anterior: for as these vessels retract above the membrane, its ligature when divided too high is no easy matter. In sawing the bones, the fibula should always be cut first, as otherwise it will be pretty sure to be splintered. This bone may be best divided on the left side by sinking the hand below the level of the limb and using the heel of the saw: and on the right, by holding the hand above the limb and cutting with the end of the instrument. If the limb be very muscular, a large pad of the muscles of the calf will be left in the flap; this will usually be a good deal in the way during treatment, may slough, and thus interfere with proper union. In order to avoid this, the best operation consists in such cases as these, in forming skin flaps on the anterior and posterior aspects of the limb, and then making a circular cut through the muscles.

In this way the ends of the bone receive but a thin covering; but this matters little if the operation is performed just below the knee, for the patient bearing upon the anterior face of the stump exercises no pressure upon its cicatrix when an artificial limb is adapted to it.

Amputations of the thigh are commonly required both for accident and disease; they may be performed in three situations: immediately above the knee, in the middle of the limb, or in its upper third. In the amputation in the lower and middle third, a tourniquet may be applied high in the limb; but when the operation is performed in the upper third there is no space for the application of this instrument, and the surgeon must then trust to an assistant compressing the artery as it passes over the brim of the pelvis. This is best done by grasping the great trochanter with the fingers of the right hand and then applying the thumb firmly over the artery. Upon this, the other thumb is then pressed as firmly as possible, and thus all chance of letting the vessel slip is prevented.

Amputation above the knee, or Vermeil's operation, is best done by lateral flaps. In performing this operation the outer flap should always be made first. The point of the knife being entered in the middle of the thigh, about three inches above the border of the patella, is close round the bone, and brought out round the centre of the ham; the flap is then cut downwards and outwards; the knife being entered again in the upper angle of the incision, is carried close round the bone to its inner side, and the inner flap made by a sweeping cut. Unless the blade be kept in contact with the bone in this situation the femoral artery is very apt to be split; the flaps being then retracted, the bone is then cleared by two sweeps of the knife, and sawn about four inches above its articular surface. In the middle and upper third of the thigh, the antero-posterior flap operation is to be preferred. In ordinary cases the anterior flap may first be made, and the posterior one subsequently fashioned by transfixion.

If, however, the patient be very much emaciated it is difficult to get a good cushion from the anterior part of the thigh in this way, and it is consequently preferable to follow the plan recommended by Mr. Luke, "of making the posterior flap first by transfixion, and the anterior one afterwards by cutting from without inwards. If the patient be excessively muscular and the operation be a primary one, I think it is better to make a skin flap by a circular incision through the subjacent soft parts. In this way the large gaping fleshy stumps are avoided, which commonly run into unhealthy suppuration and sloughing, and lead to the death of the patient."

In order to perform these surgical operations the operator should possess a thorough knowledge of the anatomy of the parts, and in all cases where circumstances will admit, good assistance should be procured. At the present time very much controversy exists relative to the use of an anæsthetic during such operations. Although opposed to the use of chloroform, I think sulphuric ether should be given unless absolutely counter-indicated. The method of administration is to saturate a sponge and allow the patient to inhale it until the desired effect is produced.

FRACTURES.

Bones may be fractured by external injuries inflicted directly on the part, by external violence acting upon the bone a short distance from the point of fracture, or by an inordinate action of the muscles.

Fractures are called transverse, when the bone is broken directly across, longitudinal, when it is split lengthwise, and oblique, when it is broken in other directions. When there is no external or flesh wound connected with the fracture, it is called simple. When the flesh is torn, and the bone protrudes, it is called compound. When occurring in con-

nexion with dislocation, it is called complicated. When the bone is broken into fragments, comminuted.

SYMPTOMS.

The symptoms of fracture are distortion of the limb, loss of voluntary motion and preternatural mobility by external force, swelling, pain and spasmodic twitching of the muscles; and finally, one of the most positive signs of fracture is the crepitus or grating sensation when the limb is moved, caused by the rough ends of the bones.

MANAGEMENT OF FRACTURES IN GENERAL.

When fracture occurs in any of the bones, it usually produces much alarm and anxiety in both patient and friends, which not unfrequently operates against the welfare of the patient and the reputation of the young physician. For the patient and friends being anxious to have the bone set as speedily as possible, the young surgeon is apt to commence his work before he is ready, and to leave it before he has completed his job. When a surgeon is called to a patient who has met with a fracture, he must see that the bed upon which the patient may be compelled to remain for several weeks is properly prepared. It should be flat, and if possible, a hair or husk mattress should be used instead of feathers or straw. He should then assist in removing the clothes by cutting the seams, so as to produce no pain. He should next proceed to examine the limb carefully, so as to produce as little pain as possible, at the same time, being sufficiently thorough to satisfy himself of the nature and extent of the injury. After doing this, the limb should be laid upon a soft pillow, and allowed to remain until all necessary bandages, splints, &c., are prepared. When all is ready, the attendant may commence and adjust the fractured bone. This is accomplished by bringing the fractured ends into apposition. In doing this, not unfrequently much difficulty is experienced by the

violent contraction of the muscles. This, however, can be easily overcome by proper flexion of the limb, and relaxation of the muscles. No pulling is required in adjusting a fracture. In all cases if proper attention be paid to the attachments of the muscles, extension and flexion of the limb, and

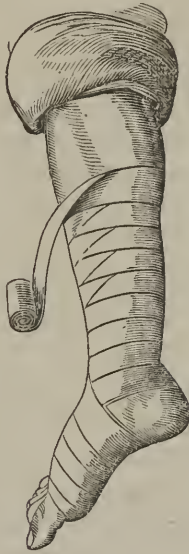


Fig. 14.

especially if a few drops of the concentrated tincture of gelseminum be given, no difficulty will be experienced from rigidity of the muscles. And even though the limb may not be the full length of the other at first, union does not commence before ten or twelve days, and always before the expiration of that period the muscles become accustomed to the new conditions, and lose their rigidity, and tension is overcome, provided a proper treatment be instituted. Hence all force is not only useless, but absolutely injurious. After the re-

duction is effected, measures must be adopted to prevent deformity and displacement of the bones. This is accomplished by means of splints, bandages and special apparatus. The bandages should be made of partially worn muslin, and about three fingers in width. After the bone has been properly adjusted, the limb washed and otherwise prepared, the bandage should be applied commencing at the lower extremity of the limb, and winding smoothly but never very tight, until the entire limb is snugly enveloped, unless the injury is confined entirely to the lower portion of the limb, in which case, the bandage need not extend more than five or six inches above the point of injury. After the application of the bandage, the splints should be applied in such a manner as to keep the parts in their natural position, and to prevent motion. Previous to applying the splints, however, they should be so padded with lint as to prevent friction upon prominent portions. After the application of the splints, another bandage should be applied, but only sufficiently tight to keep them properly adjusted. The limb should then be placed in an easy position, and remain at rest.

TREATMENT OF SPECIAL FRACTURES.

FRACTURE OF THE LOWER JAW BONE.

The treatment of fracture of the lower jaw bone consists in placing the bone in its natural position, and retaining it there. This can be done by means of pasteboard and bandages, passing around the jaw and neck and under the jaw, pressing firmly against the upper jaw and over the head.

The bandage and splint should be allowed to remain four or five weeks. During the treatment, liquid food should be taken, and the bowels kept regular by injections.

FRACTURE OF THE COLLAR BONE OR CLAVICLE.

In fracture of the clavicle, the bone should be placed in its proper position, and a figure of 8 bandage applied around the shoulder. Keeping the arm in a sling will prevent dis-

placement, unless the fracture is made in such a way as to cause a displacement downwards, in which event a pad should be placed under the bone and secured by the bandage.

FRACTURE OF THE BONE OF THE UPPER ARM OR HUMERUS.

The treatment for fracture of the humerus consists in firmly adjusting the fracture, then applying the roller and a leather splint secured by a bandage. The fracture should be kept wet with equal parts of whisky and water. The arm should be constantly kept in a sling, and the roller so adjusted as not to prevent circulation.

FRACTURES OF THE BONES OF THE LOWER ARM OR THE RADIUS AND ULNA.

When fracture occurs in the middle of the lower arm, both bones are usually broken, but when it occurs near the elbow or wrist, it more frequently happens that but one bone is broken.

The treatment for fracture of the lower arm does not differ essentially from that of the upper, save that it is necessary to place a pad between the two bones in such a way as to prevent them from coming in contact, and to maintain them in a proper position. The inner splint should be of sufficient length to give support to the hand, and the arm should be suspended in a sling.

FRACTURE OF THE NECK OF THE FEMUR.—See
Fig. 15.

TREATMENT.

Fractures of the neck of the femur should be regarded with great interest, not only on account of the difficulty which results from adjustment and maintaining the fracture in its position, but because this kind of fracture is almost entirely an accident peculiar to old age, and is frequently owing to a change of structure in the bone, consisting in an enlarge-

ment of the cancellated cells, increase of fatty matter, and a corresponding decrease of bone tissue, causing brittleness; hence it frequently breaks without much violence.

The indications of this injury, are an inverted condition of the limb, and a semiflex condition of the knee. When the patient stands, the limb swings with the toes downward, and the heel turned towards the ankle of the other foot.

When this fracture occurs in old people, there are usually more or less constitutional symptoms, such as loss of appe-



Fig. 15.

tite, quick pulse, general fever, and a constipated state of the bowels. Of the treatment of this fracture, Prof. Erichsen thus remarks: "The *treatment* of these fractures turns in a great measure upon the view that is taken of their mode of union, and on the constitutional condition of the patient. In some cases no union occurs, but the head of the bone remains in the acetabulum, being hollowed into a smooth, hard, cup-shaped cavity, in which the neck, which has become rounded off and polished, is received, and plays as in a socket. The union of the intra-capsular fracture of the neck of the femur takes place, however, in the great majority of

cases by fibrous tissue. This is owing to two causes. In the first place, to the circumstance that the fractured surfaces are not in apposition with each other, which I look upon as the most important; and secondly, that the vascular supply sent to the head of the bone, consisting only of the blood that finds its way through the ligamentum teres, is insufficient for the proper production of callus. In some cases, however, bony union takes place. This occurrence can only happen when, in consequence of the cervical ligament being untorn, or the fracture being impacted, the surfaces are kept in some degree of apposition, and the vascular supply to the head of the bone is speedily augmented by the blood carried into it through the medium of the plastic matter that is deposited between the fragments; under no other circumstances is it probable that osseous union takes place in these fractures; hence the infrequency of its occurrence; there being in all probability, not more than eighteen or twenty cases on record as having occurred in this country. When bony union has taken place, the head will usually be found to be somewhat twisted round in such a way, that it looks towards the lesser trochanter, owing to the eversion that has taken place in the lower fragment. As these fragments do not unite by bone, unless the fragments are in good contact, it is useless to confine the patient to bed for any long period, if the signs indicate considerable separation between the fragments, or if the patient be very aged and feeble.

Under these circumstances, lengthened confinement to bed usually proves fatal by the depressing influence it exercises on the general health by the intercurrent of visceral disease, or by the supervention of bed sores. It is therefore a good plan to keep the patient in bed merely for two or three weeks, until the limb has become somewhat less painful, the knee being well supported upon pillows. After this time, a leather splint should be fitted to the hip, and the patient got upon crutches. There will be lameness during the remain-

der of life, but with the aid of a stick and properly adjusted splint, but little inconvenience will be suffered. When the fragments do not appear to be much separated, there being but little shortening and indistinct crepitus, and more particularly if the patient be not very aged, but in other respects sound and well, an attempt may be made to procure osseous union. This may be done by the application of the long thigh splint, or if this cannot very readily be borne, by the double inclined plane, with a padded belt strapped around the hips. This apparatus should be kept applied for at least two or three months, when a leather splint may be put on and the patient got upon crutches. During the whole of the treatment, a generous and even stimulating diet should be ordered, and the patient kept upon a water-bed or cushion. In these fractures of the neck of the femur, the starched bandage will be found to be most useful. It may be applied as in fractured thigh, but should have additional length in the spica part, and indeed may be provided with a small pasteboard cap, so as to give more efficient support. In old people this plan of treatment is especially advantageous, as it enables the patient to sit up, or even to walk about, and thus prevents all the ill effects of long confinement to bed."

A very important portion of the treatment of these cases is constitutional. The system should be well supplied with rich food, and if it is in a feeble condition, a liberal quantity of brandy or good whisky should be taken daily. In one case which came under my treatment, I found much benefit from the internal use of phosphate of lime and iron, and an occasional dose of quinine. Where union does not occur, some surgeons are in the habit of applying the irritating plaster over the fracture, allowing it to remain until irritation is established.

FRACTURE OF THE SHAFT OF THE THIGH BONE OR
FEMUR.

The symptoms of fracture of the femur are shortening, eversion of the limb, swelling, crepitus, &c. The treatment as described by Erichsen is as follows:—1st. The fracture may be treated by simply relaxing the muscles of the limb. This is effected by laying it upon its outer side, flexing the thigh well upon the abdomen, and the leg upon the thigh, and supporting it in this position by an angular wooden or leather splint, extending from the hip to the knee, or outer ankle, and by a short inside thigh splint. This position I usually adopt in fractures, about a couple of inches below the trochanters, in which there is a great tendency to the projection outwards of the lower end of the upper fragment, and find these cases turn out better in this way than by any other plan of treatment.

2d. Extension, without regard to muscular relaxation, by means of Liston's long splint and perineal band, will be found a most successful plan of treating fractures in the middle and lower part of the thigh. In employing the long splint for the treatment of these fractures, care must be taken that it be of sufficient length, to extend about six inches below the sole, and nearly as high as the axilla. The perineal band should consist of a soft handkerchief covered with oiled silk, and must be gradually tightened. In cases of compound fracture, where the aperture exists in the posterior and outer part of the limb, I have found a long thigh splint made of oak, and bracketted opposite the seat of injury, the most convenient apparatus, enabling the limb to be kept of a proper length, and the wound to be dressed at the same time.

3d. The double inclined plane is especially useful in compound fracture of the thigh, often admitting of greater facilities for dressing the wound, and the general management of the case, than any other apparatus which can be applied.

4th. The starched bandage may be employed in most

cases. In treating fractures of the shaft of the femur with the starched bandage, the following plan will be found convenient. A dry roller should be applied to the whole of the limb, evenly and neatly, which must then be covered with a thick layer of wadding; a long piece of strong pasteboard, about four inches wide, soaked in starch, must next be applied to the posterior part of the limb, from the hip to the ankle, and another shorter piece on the fore part of the thigh. A double layer of starched bandage should now be applied over the whole, with a strong and well-starched spica. It should be cut up and trimmed on the second or third day, and then re-applied in the usual way. With such an apparatus as this I have treated many fractured thighs both in adults and children, without confinement to bed for more than three or four days. The points to be especially attended to are that the back pasteboard splint be very strong at the upper end especially, and that the spica be well and firmly applied.

FRACTURES OF THE BONES OF THE LEG BELOW
THE KNEE, (TIBIA AND FIBULA.)

The treatment for fracture of the lower leg consists first in adjusting the bones, and applying the bandage. The splints should be applied in such a way as to keep the bones in their position. A fold of linen should be placed between the bones to keep them apart, as in fracture of the forearm, and the leg should be placed in a box with two sides, and a foot-board with sufficient support to keep it free from motion.

Fractures of the ankle joint, bones of the foot, ribs, nose, face, &c., &c., should be treated according to the extent and nature of the fracture, and according to the principles laid down in this work, for the treatment of fractures in general.



Fig. 16.

TREATMENT OF COMPOUND FRACTURES.

Compound fractures should be treated upon the same general principle as those of a simple character, with the exception of preparing the parts by proper washings, and the removal of any fragment of bone, splinter, or other substance with which it may be filled, and so adjusting the splints and bandages as to allow the pus to escape, and to prevent motion of the fractured point of the limb. It must be remembered in case of fracture, that union occurs as the result of an effusion of lymph, which ultimately consolidates and unites the two ends of bone together. In two cases of compound

and comminuted fracture, which came under my observation, false joints occurred as the result of a too extensive escape of lymph, in connexion with the pus, thus leaving no material for the consolidation of the fractured bones. The wound may be dressed with elm poultices for a few days, but as soon as the discharge is freely established, the poultices should be removed, and packs wet with equal parts of whisky and water applied, and changed as often as necessary to keep the wound healthy and clean. Where the inflammation is active, and the sloughing extensive, as in old people, tonics should be given, and the parts frequently bathed in a strong infusion of hydrastin and bayberry.

COMMINUTED FRACTURES.

In comminuted fractures the mashed bones should be brought in their proper position, previous to applying the splints. In several cases where the bones were entirely mashed, and the soft parts very much torn, I have brought them together, and by the constant application of a stimulating solution of arnica or lobelia, been able to cause an entire union, without any essential deformity of the limb. In the treatment of fractures of the limbs, it must be constantly borne in mind, that the length of the limb must be maintained by extension and counter-extension, which can be done by the extension splint, as recommended in treatment of fracture of the thigh.

HERNIA.*

A protrusion of any viscus from its proper cavity is denominated a hernia.

The protruded parts are generally contained in a bag, formed by the membrane with which the cavity is naturally lined. Several parts of the body afford examples of this disease. A deficiency in the bones of the head will sometimes

* Cooper on Hernia.

allow the protrusion of a portion of the brain and its membranes, from the inner to the outer side of the skull, forming a hernia of this organ. An imperfect state of the intercostal muscles may permit a part of the lung with its pleura to form an external tumour or hernia of the contents of the chest. But the disease most frequently occurs about the cavity of the abdomen; and on this account, as well as from its superior importance in a surgical point of view, I shall confine my observations to this species with its several varieties. Many reasons may be assigned for the very frequent occurrence of protrusions from the abdomen.

First, The viscera of this cavity are numerous, some of them very moveable, and others loosely connected by peritoneal attachments with the surrounding parts, and they are constantly exposed to changes of size and relative situation, from sudden or gradual distention.

Secondly, The parietes of the abdomen are composed of muscles, which, when in action, contract the dimensions of this cavity, compress the bowels, and thus have a tendency to force them from their natural position.

Thirdly, For the passages of the vessels and nerves, these muscles and their tendons have various apertures, which naturally only large enough for that purpose, often become so much relaxed as to allow the viscera themselves to protrude.

Lastly, The muscles are sometimes imperfectly formed, and the viscera escape through unnatural apertures. The following are the situations in which abdominal hernia is found:

First, It appears at the abdominal rings, generally passing in the same course with the spermatic cords in the male, and the round ligaments of the uterus in the female; thence it is continued down into the scrotum in the one sex, and the labia pudenda in the other. This hernia of the abdominal ring is known to surgeons under the various appellations of inguinal hernia, bubonocele, scrotal hernia, and oscheocele.

Secondly, A hernia also penetrates under Poupart's ligaments, forming a tumour at the inner and upper part of the thigh. In this situation it is called femoral hernia, crural hernia, or merocoele.

Thirdly, Another species is formed at the navel, by a protrusion through the opening which was formed in the foetus for the passage of the umbilical cord. This has received the name of umbilical hernia, or exomphalos.

Fourthly, Similar protrusions take place through the tendinous covering of the anterior part of the abdomen. The linea alba and semilunaris are perforated to transmit vessels passing to the common integument; when these holes are either originally of an unusual size, or enlarged during a relaxed state of body, herniæ will occasionally be formed in them, which are then called ventral.

Fifthly, Another part at which hernia sometimes appears, is in the foramen ovale of the pelvis; it then takes the name of the aperture, and is termed hernia foraminis ovalis, obturatoria, or hernia thyroidea.

Sixthly, Sometimes, though rarely, a hernia is produced at the ischiatic nerve, under the glutæi muscles. This takes the name of the part, and is termed hernia of the ischiatic notch, or ischiatocele.

Seventhly, Sometimes, though rarely, a hernia passes between the bladder and rectum in the male, and between the rectum and uterus in the female, appearing in the perineum. It is then called hernia perinei.

That species of hernia, which from its frequently appearing at the time of birth, is called congenita, takes the same course through the abdominal rings as the inguinal hernia; but instead of passing down upon the fore part of the spermatic process, it descends within the tunica vaginalis testis, and ought therefore to be named the hernia tunicæ vaginalis.

The names that have been given to different kinds of her-

nia, have been derived from their contents, as well as their situations. If they contain only omentum, they are called omental hernia, or epiplocele; if only intestine, intestinal hernia, or enteroccele; if both omentum and intestine, entero-epiplocele, if the stomach is contained in the tumour, gastrocele; if the liver, hepatocele; if the bladder, cystocele, or hernia cystica; if the uterus, hysteroccele; and the same of others; for excepting the duodenum and pancreas, which are too closely connected with the spine, easily to change their situation, all the different abdominal viscera have occasionally been found to form the contents of a hernial tumour. However, the viscera usually met with in hernia are the omentum and the ilium; the next in frequency is the colon, then the cæcum, and lastly, the jejunum; sometimes the appendix cæci is the only part of the intestine found in the hernial sac.

Of the inguinal hernia, there are four varieties. The oblique, or that which takes the course of the spermatic cord in the male, and the round ligament of the uterus in the female. The direct, which passes immediately from the abdomen through the external abdominal ring, so that its direction from the serotum into the abdomen is not attended with that obliquity which characterizes the former. The congenital, in which the protruded viscus is found within the cavity of the tunica vaginalis. The encysted hernia of the tunica vaginalis, in which an additional membranous sac is formed within that peritoneal sheath.

The oblique makes its first appearance at the internal ring in the form of a small tumour, situated at about an inch and a half to the outer side of the external abdominal ring, in a line extending from the pubes to the anterior superior spinous process of the ilium. If its progress be uninterrupted, it proceeds gradually, obliquely downwards and inwards in the direction of the inguinal canal as far as the external ring. As long as it remains within the canal, its ex-

istence is often not suspected by the patient, because it requires a careful examination to detect it; but to a surgeon acquainted with the natural feel and appearance of the parts, it is sufficiently obvious. The length of the swelling above the ring will be found as the part of the spermatic cord included between the upper opening and the abdominal ring; that is about an inch and a half in the adult subject.

STRANGULATED HERNIA.

Hernia is said to be strangulated when the omentum that protrudes is so closely confined that it cannot be returned into the abdomen by a surgical operation, and where the circulation is cut off, and gangrene or mortification is liable to ensue. Strangulation occurs as the result of congestion of the protruded part, and the spasmodic constriction of the walls of the canal through which the viscus passes.

SYMPTOMS.

When the hernia becomes strangulated, the tumour will be found increased in size, hard and tense, and, in coughing, the impulse, which is always felt in reducible hernia, is no longer perceived. The patient becomes restless, and there will be obstinate constipation of the bowels. The pulse will be full and hard, the skin hot and pungent, the tumour will assume a dark purple colour, and be extremely painful, and if allowed to remain, nausea and vomiting will ensue, together with great pain over the entire abdomen, indicating active peritonitis. In the course of a day or two, if the patient be not relieved, the pulse will suddenly become feeble, the surface will be covered with cold clammy sweat, and dark effete matter will be ejected from the stomach, and passed from the bowels, and death will ensue.

OPERATION.

The patient should be placed upon a table, and should inhale pure ether, until complete anæsthesia is produced. The

bladder should be emptied, and an incision should be made on the neck of the sac, of sufficient length to give the surgeon plenty of room to divide the stricture. A piece of skin should be grasped with the fingers, and having the back of the scalpel nearly in contact with the abdomen, the incision should be made by an upward motion. In the next place, the forceps should be made to grasp the fascia, and by a similar upward motion it should be divided. If bleeding should occur, the vessels should be secured by the ligature.

Much caution will be required in dividing the cellular tissue which covers the sac. This should be done by pinching up a small portion with the forceps, making a small incision, and introducing a director, and laying it open upon this. If by the first attempt the sac should not be reached, another portion should be divided as before, and so on until the sac is exposed, which may always be known by its shining appearance and hard feel. The sac being exposed, it should now be opened by raising it up with the forceps, (taking care that no portion of the intestine be involved,) making a very small opening with the point of the bistoury. A broad director should now be introduced, and upon it the sac should be sufficiently slit up to allow its contents to be examined. The sac being opened, the next point is to divide the stricture. This should be done by introducing the finger, and gradually carrying it between the stricture and the intestine. Then a blunt pointed bistoury made to pass along sidewise upon it until it is passed under the stricture, when the edge of the knife should be turned up, and by a gentle sawing motion, the stricture is divided. When this is accomplished, the omentum should be examined, and if not affected with gangrene, should be gently pushed back into the abdomen. The edges of the incision should be brought in contact by means of adhesive strips, the patient placed in bed, and the entire abdomen rubbed with equal parts of water and whisky. If the bowels should not move

in the course of twenty-four hours, a small dose of neutralizing mixture should be administered.

If symptoms of peritonitis occur, they should be controlled by aconite, veratrum, &c., as directed under that head.

REDUCIBLE HERNIA.

In all cases an attempt should be made to reduce the hernia before resorting to an operation. Every possible effort should be made to reduce the hernia by means of taxis. This should be commenced by giving from five to ten drops of the concentrated tincture of gelsemium, repeated every ten or fifteen minutes until the eyelids become heavy, which indicates the constitutional influence of the drug. Then give a strong lobelia injection, after which the legs should be flexed upon the abdomen. The tumour should then be gently grasped with the left hand, and with a finger of the right hand the intestine should be gradually restored to the abdomen. If this cannot be done, the hips should be elevated, and the parts should be fomented with a strong infusion of lobelia, after which the taxis should be again attempted.

If these efforts are not sufficient to reduce the hernia, the bowels should be injected with warm water, and the stomach thoroughly evacuated by lobelia. I once reduced a strangulated hernia, when all other efforts had failed, by suddenly elevating the patient by the feet. A plaster of belladonna is used beneficially sometimes in these cases. I have also known electricity to be used with good effect. But if all these efforts fail, an operation should be resorted to, as already described.

RADICAL CURE OF HERNIA.

Various methods have been adopted for this purpose. The following method I have found effectual, not only in curing recent cases, but those of long standing. In the first place, after reducing the hernia, it should be kept in its place by

means of a truss. Then the following ointment should be applied:

Take hemlock bark, white oak bark, rock beach root, and green osier bark, equal parts, make an extract, one ounce, and add pulverized mandrake root, ten grains. Spread the extract on a thin piece of soft leather, and apply to the part through which the intestine protrudes, and apply a large padded truss of sufficient firmness to maintain the parts in their normal position. If the plaster proves too irritating, leave out the mandrake. This plaster should, however, in order to effect a cure, cause some slight irritation, which should in bad cases be maintained for months in adults. In children, five or six weeks will usually suffice. The truss may be worn some months after the hernia is to all appearance entirely cured.

FELON OR WHITLOW.

SYMPTOMS.

The pain is deep-seated, throbbing, and very persistent. Felon usually commences on the periosteum, and unless relieved at once, pus forms, and by degrees makes its appearance on the surface. In some cases it results in necrosis or death of the bone.

TREATMENT.

In the commencement of felon, if the finger be bandaged tight, and constantly kept wet with cold water for four or five hours, it will be arrested at once. Another method equally effectual, is to add ten grains of nitrate of silver to one ounce of water, and keep the finger constantly wet with the solution for ten or fifteen hours. Either of these methods, if resorted to before pus forms, will be effectual. Where there are indications of the presence of pus, the only sure method of cure is to lay the finger open to the bone, and apply elm poultices kept constantly wet with arnica and lobelia tincture equal parts. If proud flesh should appear, apply pulverized blood-root.

HYDROCELE OR DROPSY OF THE SCROTUM.

Dropsy of the scrotum is a collection of water in the membrane which surrounds the testicles. There are a variety of causes, such as rheumatism, gout, scrofula, &c. In some cases the water increases to such an extent, that the tumour becomes very large.

It can easily be distinguished from disease of the testicles, by discovering whether it is opaque or transparent. This may be done by holding a lighted lamp on the opposite side.

TREATMENT.

Give the patient a free purge of anti-bilious physic and cream of tartar, after which give the following syrup. Take queen of the meadow, one ounce; coltsfoot or asarum canadense, one-fourth pound; yellow parilla, one-fourth pound; make one quart of syrup, and add two drachms of iodide of potassium. Let the patient take one tablespoonful three times a day. Pass a strong current of electricity through the tumour four or five times a day, also give a free purge of podophyllin and cream of tartar three or four times a week. If this should not succeed, a suspensory bandage may be worn, or the water may be drawn off by means of a trochar, and scrotum injected with the wine tincture of hemlock bark, to prevent return of the infusion.

GOITRE OR BRONCHOCELE.

This disease is caused by an enlargement of the thyroid gland, and is known as thick neck.

TREATMENT.

Quilt into a flannel, large enough to pass around the neck, a quantity of crushed rock salt. Every night on retiring, wet it in a strong solution of iodide of potassium, and fasten around the neck. Remove it in the morning, and bathe the

neck with the following liniment. Take glycerine, two ounces; creasote, ten drops; mix, and apply once a day, after removing the sac. Also, take iodide of potassium, one drachm; compound syrup of styllingia, one pint; mix, and give the patient one teaspoonful two or three times a day. The above treatment, if persisted in, is a specific. All constitutional symptoms, of course, should receive prompt attention.

INVERTED TOE NAILS.

Inverted toe nails frequently occur as the result of wearing tight shoes, and prove very troublesome. In some cases the nail dips so deep into the soft tissues as to produce a deep irritable ulcer, sometimes giving rise to extensive vegetation or proud flesh.

TREATMENT.

The nail should be frequently scraped in the centre, as this can be borne, and cut in the middle, leaving the sides of the nail to slightly project. The shoes should be loose at the toe, and the nail daily anointed with glycerine. If this does not remedy the difficulty, the nail should be slit down in the centre, and the inverted portion drawn out with forceps. After which elm poultices should be applied until the toe is well.

GRAVEL OR STONE.

Gravel or stone may occur in the bladder, kidneys, ureters, gall-bladder, and gall-ducts.

CAUSES.

The causes of gravel are numerous; such as rheumatism, gout, hereditary predisposition, &c.

For full particulars of this disease, cause, nature, &c., see Prout.

TREATMENT.

The treatment of gravel should be governed by the nature of the case. If it be of an acid character, (which may be known by the urine turning blue litmus paper red,) lithontriptics, alkalies, and diuretics should be given for the purpose of dissolving the stone and expelling it from the bladder or organ which contains it. For this purpose the following compound may be given. Take queen of the meadow pulv., one ounce; Indian hemp, two ounces; bicarb. of potassa or saleratus, one drachm; mix, make an infusion, and let the patient take one-half tea-cupfull three or four times a day. Also inject a tea-cupfull into the bladder once a day, and after it is evacuated, inject the bladder with warm flaxseed tea, to prevent irritation. For the purpose of facilitating the action of the diuretics, a podophyllin purge should be occasionally given. The patient should also be allowed to partake freely of vegetables to prevent further calcareous accumulations. If the calculi be alkaline in its chemical nature, (which may be known by the urine turning red litmus paper blue,) forty or fifty drops of nitro-muriatic or sulphuric acid may be added to the diuretic mixture instead of the saleratus, and administered as before. In addition to the above, I have used the *aralia hispida* or dwarf elder, the elivers, asparagus, horse-chestnut tree bark, the asarum canadense or colt's foot, &c. In all cases the diuretics should be mixed with acids or alkalies, according to the chemical character of the deposit. Where these measures fail, the stone may be crushed in the bladder by means of an instrument called the lithonriptor. It will then be expelled with the urine. The operation of lithotomy should be performed by none but the most experienced surgeons. See works especially devoted to surgery for the operation.

TUMOURS, WENS, &c.

A great variety of tumours make their appearance on different parts of the body.

Those of a malignant or cancerous character have already been described, and their treatment laid down. When tumours are of a fatty character, like a wen, they are easily removed by passing a ligature around them at the base, until they strangulate and fall off, or they may be removed by the knife. When the knife is used, the integument should be dissected back, the tumour peeled out by the aid of a tenaculum, and a few slight strokes of the knife, to detach it from its adhesions, and the parts brought together and fastened by means of adhesive strips. If an artery should be divided, it should be tied. There should be no fear on account of hemorrhage of an artery, so long as it can be hooked out, and tied by a thread being passed around it.

FOREIGN SUBSTANCES IN THE TRACHEA
OR WINDPIPE, AND ŒSOPHAGUS OR
MEAT-PIPE.

It is by no means uncommon for substances to become lodged in these passages, especially in children. The substance may be a pin, needle, fish-bone, corn, beans, or a great variety of other substances. In one case an old gentleman eating pickled souse swallowed one of the small bones of a pig's foot—which lodged in the œsophagus. The parts became inflamed, and a permanent stricture occurred. It was forced into the stomach in the following manner:—A piece of sponge was thoroughly saturated with lobelia, and introduced into the passage by means of a probang. The constricted fibres were relaxed by the lobelia, and by a gentle pressure the bone was passed into the stomach. When a pin or fish-bone is lodged in the throat, before any food or drink is given, the finger should be passed as far down the throat as possible, and an effort made to extract it. If it

cannot be done in this manner, a pair of long forceps may be used. If this fails, it may be removed by gentle manipulations in the passage with a piece of dry sponge fastened to the end of a bit of whalebone. A piece of whalebone with a bit of sponge fastened to one end, and a silver cup hung by a hinge to the other end, is a very convenient instrument for removing foreign substances from the nose, throat, and ears.

In all efforts to remove foreign substances from the throat, much care should be taken not to produce irritation and inflammation. If foreign substances are forced into the air passages, they may be removed by giving a lobelia emetic. If a corroding substance, as a cent, is passed into the stomach, sweet oil should be given freely until it passes into the bowels.

RICKETS OR RACHITIS.

This is a disease peculiar to childhood, and is caused by a deficiency of bony material in the blood, owing to weak digestion, the want of proper food, or from some mercurial, syphilitic or serofulous taint in the blood.

SYMPTOMS.

Rickets usually commence by an enlargement of the lymphatic glands, bloated appearance of the face, irritable disposition and general debility. Consecutive upon these conditions is a curved spine, a prominence of the breast-bone, enlargement of the joints, &c.

TREATMENT.

The cause should be removed as far as possible, and the patient put upon the following compound:—Take phosphate of lime, one ounce; phosphate of soda, one drachm; carbonate of iron, three drachms; port wine, one quart; give from one teaspoonful to one tablespoonful four or five times a day; also give one tablespoonful of antiseptic syrup two

or three times a day; give freely of beef-tea, or nourishing broths, and let the patient take all the out-door exercise that can be tolerated; also one or two cold baths per week.

CORNS AND WARTS.

Corns may be cured by wearing loose shoes, and bathing them in the following liniment: Take glycerine, two ounces; iodine, ten grains; mix, and use once or twice a day; or apply the liniment on lint, and secure by a bandage. Corns may be extracted by touching them with nitro-muriatic acid, and then applying elm poultices until they come out. Warts may be cured in the same way, or by the application of the juice of purslane, as recommended in another part of the work.

DISLOCATIONS.

When any bone is displaced from another without fracture, it is called simple dislocation, but when complicated with laceration of the soft parts, it is called compound and complicated dislocation. The re-adjustment of the parts in either case is called reduction. In speaking of the treatment of dislocations, we shall recommend the new school method, as introduced by Dr. Benoni Sweet, for the publication of which we are much indebted to William A. Foster, M. D., one of our former pupils, and a nephew of Dr. Sweet. This is the first publication of the new method of reducing dislocations as practised by the author.

There are but two theories in the reduction of dislocations of any practical utility. One is that of extension and counter-extension, as practised by the old school, the other, the rotary plan of the new school. Great improvement has been made in this branch of surgery in past years, which is due to the science and skill of the new school. The principles and rules of action upon which this new method is established, are, that as bones are not *pulled out of joint*, they should not be *pulled into joint*, but that they are *rolled out of joint*, and,

therefore, should be *rolled into joint*. The old theory of extension and counter-extension is arbitrary, and from its injurious results and inefficiency in meeting the demands of all cases it may justly be deemed unphilosophical. New apparatus and machines are invented by those who teach and practise the extension theory to overpower the contractility of the muscles. This method is fraught with indescribable mischief, which the considerate sense of the people has discountenanced wherever the new method has been understood and practised.

The new method of reducing luxation operates by simple means and reverse laws. Its principles require no mechanical force to facilitate reduction; nor do they countenance venesection and antimonials as valuable prerequisites, but reject them as seriously injurious to the health and well-being of the patient. The new mode of reasoning is that all luxations are caused instantaneously, and effected by a rotary motion; therefore, in order to reduce the luxation it must be done instantaneously, while the muscles are relaxed, and the patient is unaware of the intention of the operator. By so doing, there is no muscular action or resisting force to overpower, nor does the operator stand in that fearful position which the practitioner of extension occupies in regard to the "irremediable disease" that he fears may arise in the joint from exercise after the reduction. After this instantaneous reduction the muscles are not left in a weakened state, but, having their normal strength and vigour, there is no fear of a second dislocation caused by proper exercise, nor is there any time to be lost for lacerated ligaments to unite, or sprained parts to gain strength. The difference then between the two modes of luxation is that the new method requires no depleting or debilitating agents to facilitate the reduction, nor any overpowering or mechanical forces to accomplish the desired object; nor is the length of time that is required to reduce a dislocated bone by distention at all necessary; for according to the new theory the length of time required to

reduce luxation, with one exception, is five seconds. No confinement is necessary after reduction by the new method, for it is accomplished in so short a space of time that the muscles remain in nearly a normal condition, and all that is necessary to aid nature in the repair is proper exercise.

The following brief description of some of the more important forms of luxations, and the reduction of them, will still further illustrate the new method.

DISLOCATION OF THE SHOULDER JOINT

May occur either downwards or forwards, or it may be partially dislocated in other ways. If it is thrown downward, the treatment, according to the new plan, consists in elevating the arm as much as possible, and then placing the knee of the operator or a suitable roller in the axilla, which must be firmly retained in its position, and then by using the arm as a lever, and the knee or roller as a fulcrum, the arm is to be carried downwards and backwards, till the head of the humerus is raised to the edge of the glenoid cavity; then by suddenly bringing the arm downwards, and towards the side of the patient, the head of the bone will easily glide into its proper position.

If the dislocation is *forwards*, the head of the humerus is thrown on the inner side of the coracoid process, and may be felt under the clavicle.

TREATMENT.

After the patient has been seated in a convenient position, the operator should stand well back and to the side of the patient, and grasp the patient's wrist with his left hand,—if it is the left shoulder that is dislocated, and *vice versa*,—and turn the palm of the hand well up;—at the same time, a firm grasp should be made with the fingers of the opposite hand against the head of the humerus, and the thumb against the acromion process; then by keeping the palm of the hand

upwards, carrying the arm upwards and backwards, till the elbow is nearly on a level with the shoulder, and then by suddenly carrying the fore-arm upwards, and directly behind the head of the patient, the reduction will be easily accomplished.

DISLOCATION OF THE HIP-JOINT.

There are four principal varieties of this dislocation. 1st. The dislocation upwards, in which the head of the femur is thrown on the dorsum ilii; 2d, the dislocation backwards on the sciatic notch; 3d, downwards into the foramen ovale; 4th, forwards on the os pubis.

TREATMENT.

The same plan that is used to reduce the first variety is to be employed to reduce the second; and the same mode that will reduce the third variety is also to be resorted to in the fourth.

The reduction is effected as follows:—If the dislocation is either of the first two varieties, let the patient be placed in a longitudinal position, and to the side of the bed. The operator should now have an assistant place his hand firmly against the head of the femur, standing well back, or to one side, so as not to obstruct the movements of the operator, who should now seize the patient's ankle with one hand, and with the other grasp the limb just above the knee, and flex the limb as much as possible, carrying the thigh upwards, and across the ilium of the opposite side. The operator should now tell the assistant to press firmly against the head of the bone, while he suddenly rotates the limb outwards and slightly upwards, i. e., rotate the limb in precisely the opposite direction from that in which it was first rotated. By these simple means the bone will easily be replaced.

The last two varieties may be reduced on precisely the same plan, with the exception of the manner of flexing the

limb. The limb in these varieties should be flexed upwards and outwards, and while the assistant is pressing against the bone, as before, the limb is to be rotated inwards, and brought down alongside its fellow.

DISLOCATION OF THE ANKLE

May occur in various directions, outward, inward, forward and backward. The outward and inward varieties are the most common.

TREATMENT.

The operator should seize the tarsal portion of the foot of the patient with one hand, and grasp the sole of the foot with the other, having the thumb of the latter hand pressing firmly against the astragalus just beneath the fibula; he will now suddenly rotate, or throw the ankle inwards. The treatment for the inward variety is the same, with the exception that the motions and the position of the hands are to be reversed.

DISLOCATION OF THE ELBOW JOINT.



Fig. 17.

Dislocation of the elbow joint is by no means uncommon,

and in many cases the diagnosis is very obscure. Especially is this the case when it is connected with violent injury of the soft parts. The most common dislocation is that in which both bones are thrown backwards with or without fracture of the coronoid process. In this injury the olecranon process will make a prominent projection backwards, and the articular ends of the humerus and tendons of the triceps muscle can readily be felt. In cases where the coronoid process is fractured, there will be great mobility about the joint as well as distinct crepitation.

When dislocation of both bones occurs forward, it is always connected with fractures of the olecranon process. The lateral dislocation is usually only partial, as either the radius comes in contact with the internal condyle, or the ulna with the external one. The ulna or radius may be both dislocated, or only one. When the ulna alone is dislocated, it always occurs backwards, and in the majority of cases the coronoid process will be found fractured. The radius alone may be dislocated, either forwards, backwards, or outwards, or, as sometimes occurs, the radius and ulna may be dislocated in opposite directions, the radius forwards, and the ulna backwards.

TREATMENT.

The manner of reduction of dislocation of the elbow joint varies according to the nature of the dislocation. When the injury is connected with a fracture of either of the processes, the reductions although much easier than where the processes are not fractured, are more difficult to be permanently cured, owing to their strong tendency to dislocate again. When the ulna is dislocated, it may be reduced by bending the arm over the knee. This is done by grasping the forearm with both hands, and firmly pressing the bent knee into the bend of the injured elbow, so as to disengage the ulna from the humerus, and restore the arm to its natural position. In dislocation of the radius the reduction can usually be accom-

plished by extension at the shoulder. After the reduction is accomplished, a lateral angular splint should be applied, and if it is the ulna which is dislocated, a pad should be passed over its head so as to prevent its re-dislocation, which is very apt to occur. To prevent inflammation from arising, cold packs should be frequently applied, the diet should be mild and cooling, the bowels opened by a compound cathartic pill, and the arm kept perfectly at rest. After the inflammation has subsided, gentle motion should be allowed, and, to prevent stiffness, a liniment should be used, made as follows:

Rx.—Oil of stillingia,..... ʒij.
 “ lobelia,..... ʒj.
 alcohol,..... ʒij.

Mix, and bathe the arm three or four times a day.

Where the dislocation is connected with fracture, the fractured bone should be adjusted, and the inflammation reduced by the use of hot or cold packs, or fomentations of arnica or lobelia, lye baths, aconite, &c.

DISLOCATION OF THE WRIST.

Dislocation of the wrist, although not very common, occurs



Fig. 18.

occasionally. When it does, it may be distinguished from fracture by the absence of crepitation, and the greater amount of deformity.

TREATMENT.

The reduction of dislocation of the wrist is very simple and easy, and the support should be made by the use of an antero-posterior splint. Dislocation of the bones of the carpus occasionally occurs, and may be treated upon the general plan given above: also, those of the thumb and fingers. Dislocation of the jaw may be reduced by placing a cork between the teeth, and pressing the jaw upwards and backwards, until it glides into its proper position.

CLUB FOOT OR TALIPES.

There are four varieties of this deformity. The first is called talipes varus. See Fig. 19.

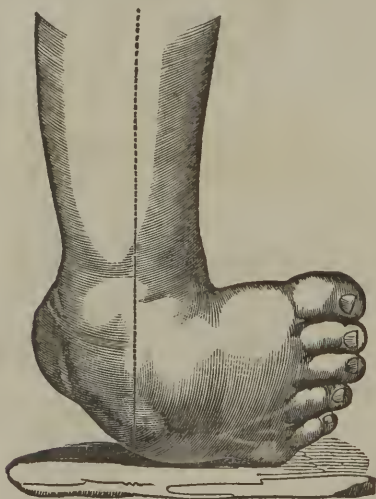


Fig. 19.

In this variety, the foot is turned inward, and the person walks upon the outside of it, the heel being elevated. It is caused by the contraction of the adductors of the foot and the calf of the leg.

In *talipes calcaneus*, the toes and foot are elevated to an acute angle with the leg, the heel resting on the ground. See Fig. 20.



Fig. 20.

It is caused by a contraction of the *tibialis anticus*.

In *talipes equinus* the heel is somewhat elevated, and the person walks on the ball of the foot. See Fig. 19.

It is usually caused by contraction of the *gastrocnemius* muscle, or muscle of the calf of the leg.

In *talipes valgus*, the foot is turned out, so that the patient walks on the inner side of the foot. It is caused by the contraction of the adductors. See Fig. 21.

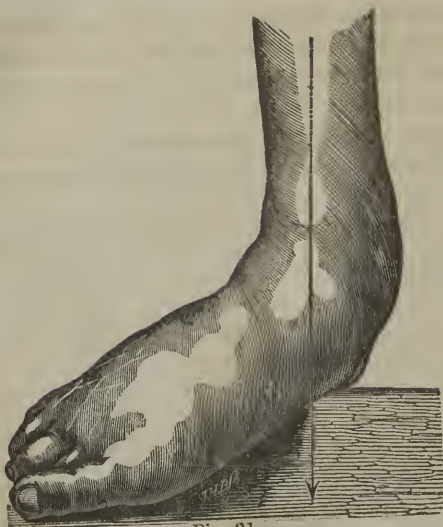


Fig. 21.



Fig. 22.

TREATMENT.

The majority of all cases of club foot can be cured, if treated early, by gentle pressure, made by means of shoes

manufactured for the purpose. They are so arranged, that pressure may be made on the contracted muscles from day to day until finally the contraction is overcome. When this treatment fails, the deformity may be overcome by an operation called tenotomy, which consists in a division of the contracted tendons. See works on surgery for the method of operation.

Fig. 23 represents an instrument used for the cure of talipes.



Fig. 23.

PART VI.

MATERIA MEDICA AND PHARMACY.

By Materia Medica is understood that branch of medical science which treats of all medicines which are adapted to the removal of diseases in their natural state. They may be simple, or compound, organic, or inorganic. The former belong to the animal and vegetable kingdoms, and the latter to the mineral kingdom.

By Pharmacy is understood that department of medical science which relates to compounding, mixing, and preparing all medicines which differ from those found in their natural state. The following is Dr. Murray's arrangement of the Materia Medica.

1. *General Stimulants*.—These are diffusible, as narcotics and anti-spasmodics, and permanent, as tonics and astringents.

2. *Local Stimulants*.—These are emetics, cathartics, emmenagogues, diuretics, diaphoretics, expectorants, sialagogues, errhines and epispastics.

3. *Chemical*.—These are refrigerants, antacids, lithontriptics and escharotics.

4. *Mechanical Remedies*.—These are anthelmintics, demulcents, diluents and emollients.

The following is the arrangement of medicinal substances, according to their therapeutic properties, by Dr. James Johnstone:—

CLASS I. Medicines which act upon the alimentary canal.

CLASS II. Medicines which act upon the glandular system, and upon the secretory and excretory vessels.

CLASS III. Medicines which act upon the heart and arteries.

CLASS IV. Medicines which act upon the brain and nervous system.

CLASS V. Medicines which act upon the muscular fibre.

CLASS VI. Medicines which act upon the skin and external parts by application to the surface of the body.

CLASS I. Medicines which act upon the alimentary canal.

1. *Emetics*.—Medicines which evacuate the stomach by exciting vomiting.

2. *Cathartics*.—Medicines which expel the fæces by increasing the peristaltic motion of the intestines.

3. *Anthelmintics*.—Medicines which destroy intestinal worms by expelling them from the body.

4. *Antacids*.—Medicines which counteract acidity in the stomach.

5. *Demulcents*.—Medicines which protect and lubricate the coats of the alimentary canal.

6. *Antidotes*.—Medicines which neutralize poisons when received into the stomach.

CLASS II.—Medicines which act upon the glandular system, and upon the secretory and excretory vessels.

1. *Secretory Stimulants*.—Medicines which act upon the whole glandular system.

2. *Sialagogues*.—Medicines which increase the secretion of saliva.

3. *Expectorants*.—Medicines which promote the secretion of mucus or pus from the bronchial tubes.

4. *Errhines*.—Medicines which promote the secretion of mucus in the nostrils.

5. *Diaphoretics*.—Medicines which excite cutaneous exhalation.

6. *Diuretics*.—Medicines which increase the secretion of urine by exciting the action of the kidneys.

7. *Emmenagogues*.—Medicines which promote the menstrual discharge.

CLASS III.—Medicines which act upon the heart and arteries.

1. *Sedatives*.—Medicines which diminish the power and velocity of the circulation by their power on the heart and large arteries.

2. *Refrigerants*.—Medicines which diminish the heat of the body, by their action on the extreme vessels.

3. *Tonics*.—Medicines which invigorate the circulation, and thus relieve debility or atony.

4. *Arterial Stimulants*.—Medicines which excite the circulation.

CLASS IV. Medicines which act upon the brain and nervous system.

1. *Narcotics*.—Medicines, which by their operation on the brain and nerves, diminish sensibility and induce sleep.

2. *Antispasmodics*.—Medicines which by their operation on the nervous system, allay inordinate muscular action.

3. *Nervous Stimulants*.—Medicines which excite the brain and nervous system, and thereby increase their irritability and energy.

CLASS V. Medicines which act upon the muscular fibre.

1. *Astringents*.—Medicines which by inducing contraction of the muscular fibre, restrain inordinate evacuations and hemorrhages.

CLASS VI.—Medicines which act upon the skin and external parts, by application to the surface of the body.

1. *Epispastics*.—Medicines which excite external irritation.

2. *Emollients*.—Medicines which allay external irritation, by softening the skin.

HOW TO PREPARE AND USE CONCENTRATED MEDICINES.

The proper preparation of medicine has very much to do with its action on the living organism. We often hear physicians remark that concentrated medicines are worthless, when we have every reason to believe that their inefficiency is owing to the bungling manner in which they are prepared and administered. Most of the concentrated medicines are insoluble in water and nearly all the menstrua used by physicians and nurses to administer them in. Besides a large number are comparatively insoluble in the stomach. The one who prescribes, not knowing this fact, condemns the article either as useless or spurious. Suppose the same individual should order boiled eggs for breakfast. The cook boils them thirty or forty minutes, brings them to the table, and they are eaten, but instead of proving nutritious, they irritate the stomach. Now, which ought to be condemned, the eggs, or the manner of cooking them? Every individual well knows, that however nutritious and well adapted to nourish the system an article of food may be in its crude state, unless it be properly cooked its purpose will not be accomplished. So with medicines. It is not enough that medicines be introduced into the stomach, but they must be so prepared that when they reach the stomach they pass into the circulation, and come in contact with such diseased tissues as are to be affected by them. It must further be remembered that the powers of the stomach during disease are very much enfeebled, that the fluids are vitiated, and that the fact that there is loss of appetite, proves conclusively that the stomach is not in a condition to prepare either food or medicine for assimilation. This alone should be a sufficient hint to the physician to properly prepare his medicines before introducing them into the stomach.

To accomplish this, all the concentrated medicines should be thoroughly triturated.

The uniform method which I have adopted relative to the strength of the trituration, is to triturate ten grains of the crude article, in ninety parts of some of the following materials :—The oleo-resins should be triturated in glycerine. Keith's solid remedies should be triturated either in sugar of milk, or pure white sugar. Merrell's, Hill's, Thorpe's, and such other preparations as only contain an alkaloid, resinoid, or neutral principle, will be best by triturating with equal parts of gum Arabic and sugar. About five grains of the trituration is usually the strength of one, or one and a half grains of the crude article. Or, in other words, by rubbing, mixing, and subdividing the particles of medicine, they not only become more readily absorbed, passing into the blood, &c., through the system, and producing their impressions, but the more extensive the division of the various molecules of medicine, the more extensive will be their influence upon the system: not only is this the case, but in very many instances, resinoids, oleo-resins and other principles of concentrated remedies are so slightly soluble in the stomach, that if introduced in their crude state, hours, and even days may elapse before they will reach the blood.

In the meantime the local effects are most injurious to the coats of the stomach. This being the case, it may be asked why use the concentrated articles when the crude medicines are already triturated and mixed, and are by infusion so readily diluted? The reasons are obvious. In the crude state in the majority of cases, the medical properties are mixed with woody fibre and other indigestible substances which are actually injurious to the patient, the stomach having no power to separate or digest this crude material. It is enough to remember that the stomach is not a chemical laboratory for the purpose of manufacturing medicine any more than it is a cooking stove for preparing food to nourish and sustain the system; and we may claim, with as much propriety, that all our food should be taken in a crude state as

our medicine. The very physician who objects to the use of concentrated medicines, is constantly practising concentration in a crude way by steeping and boiling in water, tincturing in alcohol, &c. In past times this was the best method known. But when the science of organic chemistry has so much enlarged its resources, and placed in our reach so many facilities, it is folly to suppose that a tin cup, a pot, a hot stove, and an inexperienced operator can extract all the medical virtues from our numerous native plants, with as much exactness and reliability as the experienced chemist in his laboratory with his superior knowledge and skill. It may be argued that the concentrated medicines are not prepared in a reliable manner; but the same objection may be urged against the crude article, as it must be properly gathered, dried and preserved in order to retain its medical virtues. In triturating medicines, when sugar is used, each article should be rubbed for twenty or thirty minutes, then placed in a well corked vial, and marked triturated. If glycerine is used, the process should be continued until every particle of medicine is dissolved.

CONCENTRATED MEDICINES.

The following is a list of concentrated remedies, the amount to be given, the diseases for which they are nearly specifics, and the frequency with which the dose should be repeated until relief is obtained. The dose has reference to the triturated article.

TRIT. REMED.	DISEASES THEY CURE.	DOSE.	REPETITION.
Ampelopsin.	Bronchitis, sore throat, and scrofula.	5 gr.	Every 2 or 3 hrs.
Alnuin.	Indigestion and debility.	3 gr.	" 3 or 4 hrs.
Apocynin.	Inflammation of the bladder.	1 gr.	" hour.
Asclepin.	Pleurisy, (Acute.)	3 gr.	" half hour.
Baptisin.	Prevents gangrene.	5 gr.	" half hour.
Caulophyllin.	Excessive menstruation.	3 gr.	" 5 hours.
Ceracein.	Enlargement of the spleen, and ague.	6 gr.	" 3 hours.
Chelonin.	Strengthens the stomach in debility.	2 gr.	" 3 hours.
Chimaphilin.	Enlarged lymphatic glands.	5 gr.	" 2 hours.
Collinsonin.	Enlargement of the valves of the heart.	2 gr.	" 2 hours.
Cornin.	Debility of the bowels.	5 gr.	" 3 hours.
Corydalin.	Syphilis.	5 gr.	" 3 hours.
Cypripedin.	Nervousness.	1 gr.	" hour.
Digitalin.	Palpitation of the heart.	$\frac{1}{2}$ gr.	" 5 hours.
Dioscorein.	Bilious colic.	6 gr.	" 10 min.
Euonymin.	Inactive liver and costiveness.	5 gr.	" 4 hours.
Euphorbin.	Nausea and vomiting.	1 gr.	" half hour.
Eupatorin Per.	Gravel.	3 gr.	" 2 hours.
Eupatorin Pur.	Rising of food, uterine debility and weakness.	2 gr.	" 3 hours.
Frazerin.	Night sweats and consumption.	5 gr.	" night.
Gelsemin.	Dysentery.	$\frac{1}{2}$ gr.	" half hour.
Geranin.	Excessive menstruation.	1 gr.	" hour.
Hamamelin.	Hypertrophy of the heart.	3 gr.	" 3 hours.
Helonin.	Loss of appetite.	3 gr.	" 5 hours.
Hydrastin.	Debility, a pure tonic.	2 gr.	" hour.
Hyoseyamin.	Vertigo and sick headache.	$\frac{1}{2}$ gr.	" 3 hours.
Irisin.	Mercurial diseases.	3 gr.	" 3 hours.
Jalapin.	Dropsy of the bowels.	10 gr.	" 6 hours.
Juglandin.	Tetter and salt rheum.	2 gr.	" 6 hours.
Leptandrin.	Aphthæ of the mouth and stomach.	3 gr.	" 2 hours.
Lupulin.	Spermatorrhœa.	5 gr.	" 2 hours.
Lycopin.	Excessive expectoration of pus from the bronchia.	3 gr.	" 2 hours.

TRIT. REMED.	DISEASES THEY CURE.	DOSE.	REPETITION.
Macrotin.	Leucorrhœa and rheumatism.	2 gr.	Every 3 hours.
Menispermin.	Old adhesions in pleurisy.	3 gr.	" hour.
Myricin.	Diarrhœa from weakness.	2 gr.	" hour.
Phytolaccin.	Syphilitic rheumatism.	1 gr.	" 2 hours.
Podophyllin.	Congested portal circulation.	2 gr.	" 3 hours.
Populin.	Nervous debility.	3 gr.	" 2 hours.
Prunin.	First stage of consumption.	5 gr.	" hour.
Rhusin.	Nursing, sore mouth.	3 gr.	" 2 hours.
Rhumin.	Scrofula.	5 gr.	" 3 hours.
Sanguinarin.	Constipation, croup, and colds.	5 gr.	" 4 hours.
Scutellarin.	St. Vitus' dance.	6 gr.	" 2 hours.
Senecin.	Female irregularity.	5 gr.	" 3 hours.
Smilacin.	Enlargement of heart.	3 gr.	" 2 hours.
Stillingin.	Obstinate scrofula.	5 gr.	" 4 hours.
Strychnine.	Palsies and epilepsy.	$\frac{1}{4}$ gr.	" hour.
Trillin.	Acute rheumatism.	2 gr.	" half hour.
Veratrin.	All forms of bilious fever.	gr.	" half hour.
Viburin.	Epilepsy.	3 gr.	" 2 hours.
Xanthoxylin.	Powerful stimulant.	3 gr.	" half hour.
Santonine.	Worms of all kinds.	10 gr.	" 2 hours.
Emetine.	Emetic.	10 gr.	" 5 min.
Quinine.	All periodic diseases, ague, neu- ralgia, &c., &c.	5 gr.	" hour.
Colchicia.	All forms of dropsy.	1 gr.	" 6 hours.
Gossypia.	Emmenagogue and abortion.	10 gr.	" 2 hours.
Lactucin.	Wakefulness.	$\frac{1}{2}$ gr.	" half hour.

TINCTURES CONCENTRATED.

TRIT. REMED.	DIS. THEY CURE.	DOSE.	REPETITION.
Aconite.	Typhoid, and all forms of debili- tating fevers.	$\frac{1}{2}$ to 1 drop.	Every half hour.
Arnica.	Bruises and sore- ness.	1 to 2 drops.	" hour.
Lobelia.	All spasms, asthma and choleraasph.	1 to 2 drops.	" half hour.
Veratrum viride.	All inflammatory fevers, bronchitis, pneumonia, &c.	10 to 40 drops.	" 15 or 20 min.
Xanthoxylin.	Cholera infantum.	20 to 60 drops.	" 10 or 15 min.
Capsicum.	Fainting, and great prostration.	40 to 80 drops.	" 20 or 30 min.
Cannabis indica.	Consumption.	60 to 100 drops.	" 4 or 5 hours.
Matico.	All cases of hemor- rhage.	30 to 40 drops.	" half hour.
Oil erigeron.	Uterine hemor- rhage.	10 to 40 drops.	" 10 or 15 min.

TRIT. REMED.	DIS. THEY CURE.	DOSE.	REPETITION.
Tinct. of ignatia bean.	Tetanus, nervous spasms, &c.	1 to 5 drops.	Every 2 or 3 hours.
Rhus radicans.	Palsy, last stages of typhoid fever.	1 to 3 drops.	" 2 or 3 hours.
Gelsemium sempervirens.	All acute inflammatory diseases, and all fevers where the brain is not affected.	1 to 3 drops.	" half hour.
Oil of capsicum.	Asphyxia, from drowning, chloroform, &c.	1 drop.	" 5 minutes.
" cubeba.	Gleet.	5 drops.	3 times per day.
" ergot.	Night sweats, and copious expectoration in consumption.	1 drop.	Every hour.
" male fern.	Tape worm.	60 drops.	" hour.
" lobelia.	Hooping cough, and infantile spasms.	$\frac{1}{4}$ to $\frac{1}{2}$ drop.	" hour.
" bl. pepper.	Chronic ague.	5 drops.	5 times a day.
" stillingia.	Gout.	1 drop.	Every hour.
" fire weed.	Piles.	5 drops.	4 times a day.
Valerianate of ammonia.	Neuralgia, and all nervous affections of the stomach.	1 to 2 drops.	3 or 4 times a day.
Valerian. of iron.	Nervousness where the blood is impoverished.	$\frac{1}{2}$ to 1 grain.	3 or 4 times a day.
Oil of skunk cabbage berries.	Hooping cough.	1 to 3 drops.	Every hour or two.

All the oils should be triturated with sugar or gum Arabic, and the concentrated tinctures should be largely diluted with water.

Of all articles triturated in glycerine, one drop may be considered equal to one grain of the articles triturated in sugar or gum.

A LIST OF CRUDE ARTICLES.

Abelmoschus Esculentus, (*Okra*.) The okra is used for poultices instead of slippery elm. The leaves and fruit are used.

Abies Balsama, (*Fir Balsam*.) Good for dyspepsia and chronic rheumatism. Dose, ten to fifteen drops. Used in Paine's mild zinc ointment.

Abies Canadensis, (*Hemlock Spruce*.) The gum, oil, and pulv. bark, are the parts used. Dose of the oil, five to ten drops; of bark, ten to fifteen grains.

Abies Excelsa, (*Norway Spruce Fir*.) The gum or Burgundy pitch may be used externally as strengthening plaster, in rheumatism, &c.

Abies Larix, (*Larch*.) This is Venice turpentine, and is used in plasters and liniments.

Abies Nigra, (*Double Spruce*.) A decoction of the boughs of this article is valuable for chronic inflammation of the bladder and kidneys.

Acacia Arabica, (*Acacia*), (*Gum Arabic*.) One teaspoonful to a tumbler full of water, makes an invaluable mucilage in typhoid fever.

Acacia Catechu. This is an active astringent gum, used in dysentery, hemorrhage, &c.

Acer Striatum, (*Striped Maple*.) A strong infusion of this is regarded as a specific for hemoptysis and other hemorrhage.

Acetum, (*Vinegar*.) This is used extensively in acetic tinctures, and croup syrup.

Achillea Millefolium, (*Yarrow*.) An infusion of the herb is almost a specific for night sweats in consumption. One ounce to one pint of water. Dose, one half teacup-full three or four times a day.

Acidum Aceticum, (*Acetic Acid*.) Ten grains of this acid

dissolved in one ounce of water, is valuable for secondary syphilis, given in ten or fifteen drop doses, three or four times a day.

Acidum Aceticum, (*Empyreumaticum*.)

Acidum Pyroligneum, (*Pyroligneous Acid*.) Is a valuable antiseptic in scarlatina, typhoid fever, small pox, &c. Dose, from ten to twenty drops.

Acidum Beuzoicum, (*Beuzoic Acid*.) Used in rheumatism and gout. Dose, one or two grains.

Acidum Carbazoticum, (*Carbazotic Acid*.) Used in dyspepsia, intermittent and remittent fever, and diseases of the liver. Dose, one-half grain once or twice a day, in gum water.

Acidum Chromicum, (*Chromic Acid*.) Used in croup, bronchitis, and phthisis. It is also used as a painless caustic, in cancer, for which it is most valuable. Dose, internally, from one thirtieth to one twentieth of a grain, in gum water.

Acidum Citricum, (*Citric Acid*.) It is used for rheumatism, prepared like lemonade, and drank freely. Also in scurvy.

Acidum Gallicum, (*Gallic Acid*.) Used as an astringent, in three or four grain doses. Epistaxis, &c.

Acidum Hydriodicum, (*Hydriodic Acid*.) Used instead of iodine, in one or two drop doses.

† *Acidum Hydrochloricum*, (*Hydrochloric Acid*, *Muriatic Acid*.) It is used as a caustic in cancer, &c. Also for night sweats, hectic fever, &c. Dose, from five to ten drops, in sage tea, once or twice a day.

Acidum Hydrocyanicum, (*Hydrocyanic Acid*, *Prussic Acid*, *Cyano-hydric Acid*.) Used in the latter stages of typhus and typhoid fever. From one-half to two drops given in mucilage is a dose.

Acidum Lacticum, (*Lactic Acid*.) Used in dyspepsia.

Dose, one to two drachms in sweetened water. Also for triturating medicines.

Acidum Nitricum, (*Nitric Acid, Aqua Fortis.*) Used in secondary syphilis, in one or two drop doses once or twice a day.

Acidum Nitro-hydrochloricum, (*Nitro-hydrochloric Acid.*) Used in dyspepsia. Dose, three or four drops, sufficiently diluted, three or four times a day.

Acidum Phosphoricum Dilutum, (*Diluted Phosphoric Acid.*) Is used in fever, neuralgia, in from ten to fifteen drop doses two or three times a day.

Acidum Sulphuricum Aromaticum, (*Elixir of Vitriol.*) Is used in debility of the stomach. Dose, from ten to twenty drops, given in a tea of *hydrastis Canadensis*.

Acidum Sulphuricum, (*Sulphuric Acid, Oil of Vitriol.*) Used as a caustic in cancers. See cancer recipe in formulary.

Acidum Tannicum, (*Tannic Acid, Tannin.*) Used as an astringent. Also in disease of the mucous membrane. Dose, four or five grains.

Acidum Tartaricum, (*Tartaric Acid.*) Used in scorbutus. It is also one of the ingredients of Seidlitz powders. Dose, one or two grains in sweetened water.

Aconitum Napellus, (*Monk's Hood.*) For its use see *Materia Medica*, Part 1st, page 195.

Acorus Calamus, (*Calamus, Sweet Flag.*) Used in flatulency.

Actæa, (*Actæa Alba, White Cohosh.*)

Actæa Rubra, (*Red Cohosh.*) Uterine tonic, and good in rheumatism.

Actæa Spicata, (*Baneberry, Herb Christopher.*) Active purgative, used in fevers and bilious affections.

Adeps, (*Lard*.) One of the principal ingredients of ointments and *cod liver oil*.

Adiantum Pedatum, (*Maidenhair*.) A decoction is almost a specific for leucorrhœa, used freely, internally, and as an injection.

Æsculus Hippocastanum, (*Horse Chestnut*.) Used in intermittent fever and dropsy, in decoction, drank freely.

Agaric, (*Touchwood*, *Spunk*, *Tinder*.) Used as a styptic.

Agave Virginica, (*False Aloe*.) One of the principal ingredients of consumptive pill, and is very valuable in phthisis.

Agrimonia Eupatoria, (*Agrimony*.) Used in obstructed menstruation in the form of wine tincture.

Ajuga Chamæpitys, (*Ground Pine*.) A good diuretic.

Alcohol. Used for tinctures, and as a stimulant.

Aletris Farinosa, (*Unicorn Root*.) Is used in all female difficulties as a uterine tonic. Dose of the powdered root, from three to five grains.

Alisma Plantago, (*Water Plantain*.) This is used in a tea, as a remedy in hydrophobia and snake bites.

Allium Sativum, (*Garlic*.) Used as a poultice instead of onions.

Allium Cepa, (*Onion*.) Used as a poultice, and in the form of syrup in coughs.

Alnus Rubra, (*Tag Alder*.) One of the best tonics in debility, may be used freely.

Aloe Spicata, (*Aloes*.) Used in the form of injection to remove seat worms. Ten grains to six ounces of water, used at bed time.

Alpinia Cardamomum, (*Cardamom*.) Used for children in colic.

Althæa Officinalis, (*Marsh Mallow*.) One of the best mucilaginous diuretics in use. Dose, one teaspoonful pulv root in half a tumbler of water, four or five times a day.

Alumen, (*Alum*, *Sulphate of Alumina and Potassa*.) One or two grains at night a useful remedy for incontinence of urine.

Amaranthus Hypochondriacus, (*Amaranth*,) (*Coxcomb*.) A decoction is good in dysentery.

Ambrosia Trifida, (*Tall Ambrosia*,) (*Rag Weed*.) Used in prolapsus uteri and leucorrhœa. A strong decoction may be drank freely.

Ammoniacum, (*Gum Ammoniac*.) Is used in syphilis and rheumatism. In four or five grain doses, two or three times a day.

Ammonia, (*Ammonia*.) Volatile stimulant. Dose, five or ten grains in water.

Ammonix Hydrochloras, (*Chlorohydrate or Muriate of Ammonia*.) An alterative. Used for diseases of the liver. Dose, three or four grains.

Ampelopsis Quinquefolia, (*American Ivy*.) Is an invulnerable remedy in scrofula. Used in the form of a syrup for scrofula.

Amygdala Communis, (*Almond Tree*.) Used as a tonic.

Amygdalus Persica, (*Peach*.) Is used for weak stomach, in infusion drank freely.

Amylum, (*Starch*.) Used as a nourishment.

Anacyclus Pyrethrum, (*Pellitory of Spain*.) Used in rheumatism. Dose, twenty or thirty grains.

Anagallis Arvensis, (*Red Chickweed*.) Is said to be an antidote to hydrophobia: it cures epilepsy. Dose, one-half pint of the infusion often.

Andira Inermis, (*Cabbage Tree Bark*.) Is used in delirium tremens. Five to ten grains a dose.

Andromeda Arborea, (*Sorrel Tree*.) Is a diuretic. A decoction of the leaves may be drank freely.

Anemone Nemorosa, (*Wood Anemone*,) (*Pulsatilla*.) One or two drops of the tincture is almost a specific for cutaneous erysipelas, given two or three times a day.

Angelica Atropurpurea, (*Purple Angelica*.) A tea sweetened may be used instead of paregoric for children.

Antennaria Margaritaceum, (*Pearl Flowered Life Everlasting*.) A teaspoonful of the gin tincture given two or three times a day is valuable for asthma.

Anthemis Nobilis, (*Chamomile, Roman Chamomile*.) One of the very best tonics, used freely.

Apocynum Androsæmifolium, (*Bitter Root*.) An antidote to syphilis. Dose, five or ten grains of pulv. root, also a good diuretic.

Apocynum Cannabinum, (*Indian Hemp*.) Is a specific for neuralgia and lung affections. Used in tincture, infusion and extract. Dose of the tincture, from ten to twenty drops. Of the extract, one or two grains. Of the strong infusion, from a tablespoonful to half a teacupful, three or four times a day.

Aralia Hispida, (*Dwarf Elder*.) Valuable in dropsy, gravel, and diseases of the kidneys and bladder. Dose, ten or twelve grains, or a strong decoction may be drank freely.

Aralia Nudicaulis, (*Small Spikenard*.) Good purifier of the blood, used in the form of a syrup.

Aralia Spinosa, (*Prickly Elder*.) An active stimulating alterative. Used in diarrhœa, cholera morbus, and cholera.

Arctium Lappa, (*Burdock*.) Used in the form of a syrup to purify the blood, used in the form of an infusion as a diuretic.

Arctostaphylos Uva Ursi, (*Uva Ursi*.) Is a diuretic. Two or three fluid ounces in infusion may be taken every three or four hours.

Argenti Nitras, (*Nitrate of Silver*), (*Lunar Caustic*.) Used as a caustic.

Aristolochia Serpentaria, (*Virginia Snakeroot*.) One of the components of the sudorific drops.

(*Arnica Montana*), (*Leopard's Bane*.) Ten or fifteen

drops of the tincture in half a tumbler of water, and one teaspoonful every two hours, good for sore mouth, also for bruises, sores, &c., &c.

Artemisia Absinthium, (*Wormwood*.) The tincture is a tonic and vermifuge.

Arum Triphyllum, (*Dragon Root or Indian Turnip*.) One-half teaspoonful of the pulverized root every night is almost a specific for asthma. Also good for coughs, colds, &c.

Asarum Europæum, (*Asarabacca*.) The pulverized root is a valuable catarrh snuff.

Asarum Canadense, (*Wild Ginger*.) A strong infusion drank freely is almost a specific for dropsy of every variety.

Asclepias Cornuti, (*Common Silkweed*.) Mild diuretic. Strong infusion drank freely.

Asclepias Incarnata, (*Swamp Milkweed*.) Its properties very much resemble the *Cannabis Indica*, and may be used in all cases as a substitute. Dose of the extract, one or two grains. Tincture, twenty or thirty drops.

Asclepias Tuberosa, (*Pleurisy Root*.) A valuable diaphoretic. An infusion drank freely.

Asparagus Officinalis, (*Asparagus*.) A tea of the roots is a valuable diuretic. One-half pint drank two or three times a day is a cure for dropsy.

Aspidium Filix Mas, (*Male Fern*.) A valuable remedy for tape worm. Dose, twenty or thirty grains three or four times a day.

Astragalus Verus, (*Tragacanth*.) Used mostly for paste.

Assafœtida, (*Assafœtida*.) Good nervine. Dose, two or three grains.

Aster Puniceus, (*Red Stalked Aster*.) A valuable remedy for leucorrhœa and prolapsus uteri. Dose, one teaspoonful of the tincture, or one ounce of the infusion, two or three times a day.

Atropa Belladonna, (*Belladonna*.) See Part 1.

Balsamodendron Myrrha, (*Myrrh*.) A valuable antiseptic. Dose, five to ten grains.

Baptisia Tinctoria, (*Wild Indigo*.) The most valuable antiseptic known. Used in poultices for gangrene and mortification.

Barosma Crenata, (*Buchu*.) A mild diuretic in strong infusion drank freely.

Benzoin Odoriferum, (*Spicewood*.) A mild diaphoretic. Used as a beverage in fevers.

Berberis Vulgaris, (*Barberry*.) Alterative tonic and expectorant. Used in the form of a syrup, tincture and infusion. Dose, an ounce of tincture two or three times a day. Is said to be almost a specific for jaundice. One ounce of the syrup three or four times a day, is a valuable tonic in lung disease.

Betula Lenta, (*Black Birch*.) A warm infusion drank freely. Is an invaluable remedy in diseases of the bladder. Also a good diuretic.

Bidens Bipinnata, (*Spanish Needles*.) A strong infusion. Is a valuable emmenagogue. One gill should be taken on retiring.

Brayera Anthelmintica, (*Kausso, Casso*.) A good remedy for tape-worm. Dose, one or two drachms of the flowers, followed by a brisk purge.

Buxus Sempervirens, (*Box*.) A mild cathartic and alterative. Three or four grains of the pulverized wood may be taken every two or three hours. Used in syphilis and rheumatism.

Calendula Officinalis, (*Garden Marygold*.) A good alterative in scrofulous and cancerous affections. Dose, one gill of the infusion. Or it may be used in the form of a syrup.

Callithrice Verna, (*Water Starwort*.) A good diuretic.

Camphora, (*Camphor*.) A one or two drop dose of the tincture repeated every five or ten minutes, is valuable in cholera morbus or cholera.

Canella Alba, (*Canella*.) A mild aromatic stimulant. Used in infusion.

Cannabis Sativa or *Cannabis Indica*, (*Hemp*.) A valuable remedy in all nervous affections. Used in delirium tremens, insanity, &c. Also in lung affections. Dose, from one to ten grains of the extract. Dose of tincture, from twenty to sixty drops. This remedy has been extensively vended as a quack nostrum to cure consumption. Experience has shown it to be of little value.

Caoutchouc, (*Gum Elastic India Rubber*.) An active astringent. Dose, two or three grains.

Capsicum Annum, (*Cayenne Pepper*.) Pure stimulant. May be used in all cases where stimulants are indicated. Dose, from one to ten grains.

Carbo Animalis, (*Animal Charcoal*.) Good preventive of mortification. Used in poultice.

Carbo Ligni, (*Charcoal*.) Good preventive of mortification. Used internally.

Carthamus Tinctorius, (*Dyer's Saffron*.) Emmenagogue. An infusion. May be used freely.

Carum Carui, (*Caraway*.) A mild aromatic.

Caryophyllus Aromaticus, (*Cloves*.) One of the ingredients of the anti-bilious physic.

Cassia Fistula, (*Purging Cassia*.) One or two drachms acts as a purge.

Cassia Marilandica, (*American Senna*.) Mild cathartic.

Cassia Acutifolia, (*Senna*.) Five or ten grains is a purge. One of the components of the anti-bilious physic.

Castoreum, (*Castor*.) An antispasmodic. One teaspoonful of the tincture is a dose. Used in hysteria.

Caulophyllum Thalicteroides, (*Blue Cohosh.*) Used in female diseases in the form of a tea.

Ceanothus Americanus, (*Redroot*), (*Jersey Tea.*) Alterative. A valuable remedy in chronic affections of the liver. Also in secondary syphilis. Dose, one table-spoonful of strong infusion four or five times a day.

Celastrus Scandens, (*False Bitter Sweet.*) Alterative and diuretic. Good in dropsical affections and scrofula. Dose, one or two table-spoonfuls of decoction two or three times a day.

Centaurea Benedicta, (*Blessed Thistle.*) It is said to be a reliable remedy in epilepsy.

Cephælis Ipecacuanha, (*Ipecacuanha.*) Emetic in five or ten grain doses.

Cephalanthus Occidentalis, (*Button-bush.*) Febrifuge and diuretic. Used in gravel and fevers. One gill of infusion taken two or three times a day.

Cera Alba, (*White Wax.*) *Cera Flava*, (*Yellow Wax.*) Used in ointments.

Cerevisiæ-Fermentum, (*Yeast.*) Good preventive of mortification. Used internally and in the form of a poultice.

Cetaceum, (*Spermaceti.*) Good in coughs and colds. Sometimes used in consumption for cod liver oil, for which it is a very good substitute.

Cetraria Islandica, (*Iceland Moss.*) Good mucilage in coughs and colds, drank freely.

Chelidonium Majus, (*Great Celandine.*) One of the ingredients of celandine ointment. Five or ten drops of the tincture four or five times a day, is a good remedy for piles.

Chelone Glabra, (*Balmony.*) One of the best stomach tonics—promotes digestion and removes dyspepsia. Dose of an infusion of the leaves, one half tea-cup full three or four times a day.

Chenopodium Anthelminticum, (*Wormseed*.) A good remedy for worms. Three or four grains of the pulv. herb given at bed-time.

Chimaphila Umbellata, (*Pipsissewa*.) One of the best diuretics and antiseptics in materia medica. May be used in an infusion or syrup freely. Useful in all cases of debility, scrofula, consumption and cancerous affections.

Chiococca Racemosa, (*Cahinca*.) This is used for syphilis and necrosis or diseases of the bowels in twenty grain doses.

Chionanthus Virginica, (*Fringe Tree*.) A strong infusion drank freely through the day is said to break up ague.

Chloroformum, (*Chloroform*.) Should only be used in the form of a liniment.

Chondrus Crispus, (*Irish Moss*.) This may be used the same as Iceland moss.

Cichorium Intybus, (*Succory*.) Used as a diuretic and tonic. Dose one or two drachms of the infusion.

Cimicifuga Racemosa, (*Black Cohosh*.) Used in rheumatism and female diseases. Five or ten drops of the tinct. four or five times a day is a valuable remedy in leucorrhœa.

Cinnamomum Zeylanicum, (*Cinnamon*.) A tea of cinnamon is excellent to allay vomiting. Also to arrest morning-sickness in pregnancy. It is also used in dysentery.

Cirsium Arvense, (*Canada Thistle*.) The syrup is said to be valuable for skin diseases.

Cissampelos Pareira, (*Pareira Brava*.) (*Ice Vine*.) Diuretic and tonic.

Citrus Aurantium, (*Orange*.) Orange peel is used as a tonic in debility.

Citrus Limonum, (*Lemon*.) *Citrus Acida*, (*Lime*.) May be used in the form of a syrup in scorbutic affections.

Clematis Virginiana, (*Virgin's Bower*.) One or two

ounces of the infusion once or twice a day is valuable for impotency.

Cocculus Palmatus, (*Colombo.*) Used as a tonic in biters.

Coccus Cacti, (*Cochineal.*) From one half to one grain two or three times a day in the form of simple syrup is good for whooping-cough.

Cochlearia Armoracia, (*Horseradish.*) A valuable remedy for gonorrhœa.

Coffea Arabica, (*Coffee.*) Used mostly as an antidote to opium. Two or three ounces of strong infusion should be given and repeated every ten or fifteen minutes.

Colchicum Autumnale, (*Colchicum.*) Used in rheumatism and as a diuretic.

Collinsonia Canadensis, (*Stoneroot.*) Ox balm. A tea of the leaves is an excellent diaphoretic in fevers. The pulverized root sprinkled upon cancers is said to be very beneficial.

Collodion, (*Ethereal Solution of Gun Cotton.*) Used for abraded surfaces.

Comptonia Asplenifolia, (*Sweet Fern.*) A reliable antiseptic and tonic. Used in all cases where there is a tendency to mortification. Dose, one or two ounces of the infusion three or four times a day. An infusion of the leaves is a valuable injection for leucorrhœa.

Conium Maculatum, (*Poison Hemlock.*) From one fourth to one grain of the extract is used in epilepsy.

Convallaria Multiflora, (*Giant Solomon's Seal.*) A decoction used freely is said to be valuable for coughs and colds.

Convolvulus Panduratus, (*Wild Potato, Man of the Ground.*) A syrup made of this article taken in doses of half a wine-glass full three or four times a day is an invaluable remedy for consumption.

Convolvulus Scammonia, (*Scammony*.) An active purge. One of the ingredients of the compound cathartic pill.

Copaifera Officinalis, (*Officinal Copaiva Tree*.) A balsam of this tree is extensively used in gonorrhœa. From one half drachm to a drachm three or four times a day.

Coptis Trifolia, (*Goldthread*.) A wash made of this article is valuable for aphthæ or sore mouth. It may also be taken internally for the same purpose.

Corallorhiza Odontorhiza, (*Crawley*.) This operates specifically upon the superficial capillaries. It is one of the most reliable diaphoretics known. Dose, one or two grains of the pulverized root.

Coriandrum Sativum, (*Coriander*.) Carminative and tonic. Used in the form of a tea drank freely.

Cornu Cervinæ Ustum, (*Burned Deer's Horn*.) One or two grains of this is said to be specific for uterine hemorrhage.

Cornus Circinata, (*Round-leaved Dog-wood*.) A strong antiperiodic. It may be used instead of quinine. Dose, a gill of the infusion three or four times a day.

Cornus Florida, (*Dog-wood*.) Is used in all cases as a substitute for Peruvian bark. The flowers tinctured in gin are valuable for leucorrhœa.

Cornus Sericea, (*Swamp Dog-wood*.) One or two ounces of the infusion is an invaluable remedy for dyspepsia.

Corydalis Formosa, (*Turkey Pea*.) One of the ingredients of the compound syrup of stillingia. It is a valuable remedy in syphilis. Two or three grains of the pulverized two or three times a day.

Creasotum, (*Creasote*.) A valuable antiseptic. Dose, from one half to two drops. It is used in cases of great debility, and where there is a tendency to gangrene and mortification.

Creta Preparata, (*Prepared Chalk*.) Used as an antacid. Dose, three or four grains.

Orocus Sativus, (*Saffron*.) Dose, from five to ten grains. Used mostly as an emmenagogue.

Croton Eleuteria, (*Cascarilla*.) Dose, from ten to twenty grains. Used mostly in dyspepsia, and as a tonic.

Cucumis Colocynthus, (*Colocynth*.) Dose, from three to five grains. An irritant purge.

Cucurbita Citrullus, (*Watermelon*), *Cucurbita Pepo*, (*Pumpkin*.) The seed is the part principally used. See treatment for tapeworm.

Cunila Mariana, (*Dittany*.) Nervine tincture. Used freely is a valuable remedy for consumption. Dose, one wine-glass full three times a day.

Cupri Sulphas, (*Sulphate of Copper*), (*Blue Vitriol*.) Used as a caustic in cancer. Also one of the components of the hair tonic.

Curcuma Longa, (*Turmeric*.) Used in tincture. One or two teaspoonfuls a dose.

Cydonia Vulgaris, (*Quince*.) A syrup made of the fruit is a specific for land and sea scurvy. The seeds are valuable for gonorrhœa.

Cynara Scolymus, (*Garden Artichoke*.) A syrup of this article has been known to cure dropsy of the heart.

Cynoglossum Officinale, (*Hound's Tongue*.) A strong infusion of this will arrest hemorrhage. It is also used in dysentery.

Cypripedium Pubescens, (*Yellow Lady's Slipper*.) Nervine. A tea of this drunk freely will cure nervous headache. Used in all cases of nervous affections. Dose, one-half gill of infusion three or four times a day.

Cytisus Scoparius, (*Common Broom*.) The fresh tops and seeds made into a strong tea is a reliable remedy in all

dropsical affections. Dose, one-half pint three or four times a day.

Datura Stramonium, (*Stramonium*.) The extract and tincture are used mostly in epilepsy and nervous affections. One-fourth grain of the extract and three or four drops of the tincture. It is also used in ointments.

Daucus Carota, (*Wild Carrot*.) This is used in infusion for gravel. Dose, a tablespoonful three or four times a day.

Delphinium Consolida, (*Larkspur*), *Delphinium Staphisagria*, (*Stavesacre*.) Small doses of the bruised seed are used to remove lumbricoid worms. Dose, one teaspoonful night and morning.

Diervilla Canadensis, (*Bush Honeysuckle*.) Diuretic astringent and alterative. Dose of the infusion one gill, three or four times a day.

Digitalis Purpurea, (*Foxglove*.) Used in dropsy, and as a sedative in diseases of the heart. Dose of the tincture, from twenty to thirty drops. Of the powder, from one to two grains.

Dioscorea Villosa, (*Wild Yam*.) A specific for bilious colic. Also good in neuralgia. Dose, one tablespoonful of the decoction every ten or fifteen minutes.

Diospyros Virginiana, (*Persimmon*.) The bark of the tree is highly recommended for tape worm. Dose of the infusion, one gill, three or four times a day. A tea of the fruit is used as a laxative.

Dirca Palustris, (*Leatherwood*.) A tincture of this is used as a liniment in rheumatism. Five or ten drops internally, is also a good remedy for chronic rheumatism.

Dorstenia Contrayerva, (*Contrayerva*.) It is a stimulant and diaphoretic. Dose in powder, thirty grains.

Drymis Winteri, (*Winter's Bark*.) Used in typhoid and typhus fever. From ten to twenty grains of the pulv. bark is a dose.

Epigæa Repens, (*Trailing Arbutus*,) (*Mountain Pink or May Flower*.) Lithontriptic and diuretic. Dose, one gill of the infusion two or three times a day.

Epilobium Angustifolium, (*Willow Herb*.) An astringent, demulcent and tonic. Dose, a tablespoonful of the infusion every hour.

Equisetum Hyemale, (*Scouring Rush*.) Diuretic and alterative. Used in scrofula. Dose, two or three ounces of the infusion.

Erechthites Hieracifolius, (*Fireweed*.) The oil is a specific for piles. Made into an ointment, and applied externally, and four or five drops taken internally. It is also used in typhoid fever, dysentery, and asthma.

Erigeron Canadense, (*Canada Fleabane*.) The herb is used in infusion in dysentery. The oil is a specific for uterine hemorrhage. Dose, from five to twenty drops.

Erigeron Heterophyllum, (*Various Leaved Fleabane*,) *Erigeron Philadelphicum*, (*Philadelphia Fleabane*.) Properties same as the above.

Eryngium Aquaticum, (*Water Eryngo*.) Diuretic, stimulant, diaphoretic, and alterative; used in syphilis. Dose, from twenty to thirty grains of the pulv. herb.

Erythronium Americanum, (*Adder's Tongue*.) Used in chronic dyspepsia. It makes a cooling and emollient drink in fevers. A decoction may be used freely.

Euonymus Atropurpureus, (*Wahoo*.) An ounce of bark in a quart of gin, and a tablespoonful taken three or four times a day, is one of the best remedies for chronic affection of the liver. A decoction of the bark may be used where a mild alterative and cathartic is indicated.

Eupatorium Aromaticum, (*White Snakeroot*.) A decoction is used in hysteria. Dose, one-half teacupful three or four times a day.

Eupatorium Perfoliatum, (*Boneset.*) A cold infusion taken in half teacupful doses three or four times a day, is an excellent remedy for bilious affections, weakness of the stomach, chronic derangement of the bowels, &c. A warm decoction operates as an emetic and mild purge.

Eupatorium Purpureum, (*Queen of the Meadow.*) Used in gravel, leucorrhœa, and prolapsus uteri. Dose of the strong decoction one-half teacupful three or four times a day.

Eupatorium Teucrifolium, (*Wild Horehound.*) Antiperiodic and alterative. A gin-tincture of this article is valuable in chronic ague.

Euphorbia Corollata, (*Large Flowering Spurge.*) Emetic, diaphoretic, and purgative. From eight to ten grains is a dose of the pulv. root.

Euphorbia Hypericifolia, (*Large Spotted Spurge.*) Astringent and anodyne. Used in infusion. One ounce taken every two or three hours to allay pain and nervousness.

Euphorbia Ipecacuanha, (*American Ipecacuanha.*) Emetic, and operates in about the same doses as the English ipecac.

Euphrasia Officinalis, (*Eyebright.*) One pint of a strong infusion taken three or four times a day, is a cure for epilepsy.

Fel Bovinum, (*Ox or Beef's Gall.*) Beef's gall and vinegar used externally to bathe the neck, is almost a sure cure for quinsy.

Ferrum, (*Iron.*) The different preparations are used in all cases where there is a lack of iron in the blood. The phosphate, pyrophosphate, carbonate, and muriate tincture, are among the best preparations used. Dose, of the phosphates and carbonates, from one to five grains; of the muriate tincture, from three to ten drops.

Fœniculum Vulgare, (*Fennel.*) A tea is good for wind colic.

Fragaria Vesca, (*Strawberry*.) Anti-periodic, antiseptic, and diuretic. From one-half ounce to an ounce of the pulv. root given between the paroxysms of ague, will usually prevent a return. A gin tincture of the root is almost a sure preventive against renewed attacks. Take in doses of one wine-glass full three or four times a day. I have used all portions of the plant and root in obstinate and inveterate cases of ague, and find it equally reliable with cinchona or any of its preparations. Of the infusion, one or two pints should be taken during the interval of the paroxysms. An extract may be made of the top and root, and administered in the form of a pill. Dose, a three grain pill every two hours during the interval of ague.

Frasera Carolinensis, (*American Columbo*.) Mild tonic and alterative. Used mostly in the form of bitters.

Fraxinus Sambucifolia, (*Black Ash*.)

Fraxinus Acuminata, (*White Ash*.) The extract is used mostly for eruptive diseases, in the form of ointment. A syrup is used internally in the same diseases.

Fucus Helmintho-Corton (*Corsican Moss*.) Used in tea for gravel, &c.

Fumaria Officinalis, (*Fumitory*.) Tonic and alterative. Used in jaundice.

Galbanum (*Galbanum*.) The gum resin of an unknown plant. The extract is used as an irritating plaster.

Galipea Officinalis, (*Angustura*.) The bark is warming, diaphoretic and tonic. Used in the form of bitters.

Galium Aparine, (*Cleavers*.) A valuable diuretic. Used in all cases in disease of the kidneys or bladder. Dose, a tea-cupful of infusion two or three times a day.

Gambogia, (*Gamboge*.) The gum resin of an uncertain plant. An irritant purge seldom used by Eclectics.

Gaultheria Procumbens, (*Winter Green*.) Used in syrups to purify the blood.

Gelsemium Sempervirens, (*Yellow Jessamine*.) Used as an antidote to dysentery and fevers. See page 305.

Gentiana Lutea, (*Gentian*.) A good tonic. Ten or twenty grains of the pulv. root, or one ounce of the tinct., may be taken three or four times a day.

Gentiana Ochroleuca (*Ochroleucous Gentian*, *Samson's Snake Root*.) Dr. R. Johnson, of Ohio, regards this as almost a specific for prolapsus uteri. Dose, from five to ten grains two or three times a day, of the powdered root.

Geranium Maculatum, (*Geranium*.) Active astringent used in dysentery and hemorrhage. Dose, from five to ten grains of the powdered root.

Gerardia Pedicularia, (*Bushy Gerardia*.)

Geum Rivale, (*Water Avens*), *Geum Virginianum*, (*White Avens*.) Mild tonic and diuretic. Dose of the powder, from twenty to thirty grains.

Gillenia Trifoliata, (*Indian Physic*.) A mild hepatic purge. Dose, from twenty to thirty grains.

Glycerina, (*Glycerin*.) Used externally as a liniment, also used for the purpose of dissolving medicines, and may be taken internally to fulfil the indications of cod-liver oil. Dose, one teaspoonful two or three times a day.

Glycyrrhiza Glabra, (*Liquorice*.) A tea is good for colds and coughs: may be used freely.

Gnaphalium Polycephalum, (*White Balsam*.) A pint of strong infusion taken in doses of one half pint, two or three times a day, is an excellent remedy for females during the change of life.

Goodyera Pubescens, (*Net-leaf Plantain*.) Used in scrofula in the form of syrup.

Gossypium Herbaceum, (*Cotton*.) Fig. 24. Is an emmenagogue and parturient. It is used in suppressed menstruation, &c. See page 316.

Guaiacum Officinale, (*Guaiacum*.) Is used in tincture



Fig. 24.

for rheumatism. Dose, one-half to one teaspoonful three or four times a day.

Gunpowder, (*Pulvis Pyrius*. *Pulvis Nitratus*.) Used in poultice for felons.

Gutta Percha, (*Gutta Percha*.) Concrete juice of *isonandra gutta*. Dissolved in chloroform, is an excellent application for acute erysipelas. One ounce of gutta percha to four ounces of chloroform.

Hæmatoxylon Campechianum, (*Logwood*.) The tinct. is an abortant. Dose, wine-glassful two or three times a day.

Hæmospasis, (*Dry Cupping*.) Used in internal inflammation.

Hamamelis Virginica, (*Witch Hazel*.) Five or ten gr. of the pulverized flowers, taken previous to the monthly period, will induce catamenia. An injection of the decoction of the leaves is also used for leucorrhœa.

Hedcoma Pulegioides, (*Pennyroyal*.) A tea drunk freely will produce perspiration.

Hedera Helix, (*Ivy*.) An ointment of the leaves is valuable for eruptive diseases.

Helonium Autumnale, (*Sneezewort*.) A powder used as a snuff, is good for catarrh in the head.

Helianthemum Canadense, (*Frost Weed*.) An excellent remedy for scrofula. Used in the form of a syrup.

Helianthus Annuus, (*Sunflower*.) The seed tinctured in gin, is an excellent remedy for coughs—good in consumption.

Helonias Dioica, (*Helonias*, or *White Nettle*.) Tonic, diuretic, and vermifuge. Dose, of pulv. root, ten or fifteen grains. Also a specific for impotency—one tablespoonful of gin tincture four or five times a day.

Hemidesmus Indicus, (*Indian Sarsaparilla*.) Is said to be an antidote to syphilis, and is used in scrofula. Dose of infusion, wine-glass full three or four times a day.

Hepatica Americana, (*Kidney Liver Leaf*.) A strong infusion drunk freely is useful in chronic affections of the liver.

Hepatica Acutiloba, (*Heart Liver Leaf*.) Used in hepatic affections. An infusion may be drunk freely.

Hieracleum Lanatum, (*Masterwort*.) Good for cough syrup. Dose, a tablespoonful once in two or three hours.

Heuchera Americana, (*Alum Root*.) Twenty or thirty drops of gin tinct. three or four times a day is useful in diabetes.

Hieracium Venosum, (*Hawkweed*.) A pill made of the extract taken every night on retiring is an excellent remedy for spermatorrhœa.

Humulus Lupulus, (*Hops*.) Excellent anti-periodic and nervine. May be used in ague and all nervous affections. Dose, one gill of infusion three or four times a day.

Hydrangea Arborescens, (*Hydrangea*.) Used as a uterine tonic. Also for gravel. Dose, tablespoonful of infusion every two or three hours.

Hydrastis Canadensis, (*Golden Seal*.) A pure vegetable tonic. May be used in all cases where such a remedy is indicated. Dose of the pulv. root, from three to ten grains. Dose of infusion, one tablespoonful repeated as often as indicated.

Hypericum Perfoliatum, (*St. John's Wort*.) A syrup of this article is very useful in old ulcers, which should be bathed in a decoction of the same.

Hyssopus Officinalis, (*Hyssop*.) A warm tea drunk freely produces perspiration.

Iberis Amara, (*Candytuft*.) The pulv. seed is used in epilepsy and hysteria. Dose, from one to five grains.

Ignatius Amara, (*Bean of St. Ignatius*.) An excellent remedy in neuralgia, spinal irritation, nervous headache. Dose, from one eighth to one grain of the pulv. seed.

Ilex Opaca, (*American Holly*.) Tonic and febrifuge. Dose, from five to ten grains of the pulv. leaves.

Impatiens Pallida, (*Jewel Weed*.) A warm infusion drunk freely is a good diuretic. Dose, half a wine-glass full three or four times a day.

Inula Helenium, (*Elecampane*.) Good for coughs. See formulary for elecampane and comfrey.

Iodium, (*Iodine*.) Pure iodine is seldom used by eclectic physicians.

Ipomœa Jalapa, (*Jalap*.) An active hydragogue cathartic. One of the ingredients of antibilious physic. Dose of jalap from five to twenty grains.

Iris Versicolor, (*Blue Flag*.) Sialagogue cathartic. Valuable in all cases where indolent tumours are to be absorbed. Dose of the powered root from five to twenty grains.

Jeffersonia Diphylla, (*Twin-Leaf*.) Diuretic, alterative and antispasmodic. Dose of decoction from two to four fluid ounces.

Juglans Cinerea, (*Butternut*.) A syrup made of this article is an excellent remedy for eruptive diseases, soft rheum, &c. Dose, one tablespoonful three or four times a day.

Juniperus Communis, (*Juniper*.) Diuretic in dropsy, gonorrhœa, &c. The oil and berries are the parts principally used. Dose of the oil from ten to twenty drops. Of the infusion of the berries one wine-glass full three or four times a day.

Juniperus Sabina, (*Savin*.) The oil of this article is principally used as an emmenagogue. Dose, from ten to sixty drops.

Juniperus Virginiana, (*Red Cedar*.) The oil is an excellent remedy for rheumatism, sprains, bruises, &c.

Kalmia Latifolia, (*Sheep Laurel*.) The tincture is a valuable remedy for syphilis. Dose, five or six drops, five or six times a day.

Kino, (*Kino*.) An astringent gum used in four or five grain doses.

Krameria Triandria, (*Rhatany*.) A powerful astringent used in hemorrhage, dysentery, &c. Dose of the extract, from one to three grains, two or three times a day.

Lactuca Sativa, (*Lettuce*), *Lactuca Virosa*, (*Strong Scented Lettuce*.) A mild anodyne. Used in nervous affections. Dose, one to three grains of the extract taken at bed-time.

Larix Americana, (*Tamarac*.) A decoction of this article used freely is a good remedy for gleet.

Laurus Sassafras, (*Sassafras*.) One drachm of the pulverized bark taken every two or three hours during the paroxysms of ague, will prevent its return. As an antiperiodic it is about the strength of Peruvian bark.

Lavandula Vera, and *Lavandula Spica*, (*Lavender*.) A mild carminative used in wind colic.

Ledum Latifolium, (*Labrador Tea*.) A tea drunk freely is an excellent remedy in bronchitis.

Leonorus Cardiaea, (*Motherwort*.) Nervine antispasmodic. A decoction drunk freely is good for hysteria, nervous debility, weak stomach, &c.

Leptandria Virginica, (*Calver's Physic*.) Mild purge in twenty or thirty grain doses.

Leucanthemum Vulgaris, (*White Weed*.) A decoction is used in the place of chamomile.

Liatris Spicata, (*Button Snake Root*, *Devil's Bite*.) A uterine tonic. Also exerts a specific influence over the stomach and kidneys in diabetes. In diabetes two ounces of pulv. root in a quart of best brandy. Dose, a tablespoonful three times a day.

Lilium Candidum, (*Meadow Lily*.) The root boiled in milk makes a good poultice for ulcers.

Linum Usitatissimum, (*Flax-Seed*.) Used externally for poultices. Internally a sweetened tea is used for coughs and colds. Also as a mucilage in kidney and bladder affections.

Liquidambar Styraciflua, (*Sweet Gum*.) Used as one of the ingredients of poultice in serofulous ulcers. Also a good tonic in serofula, consumption, &c.

Liriodendron Tulipifera, (*Tulip Tree*.) A decoction of the bark drunk freely is a good remedy for night sweats.

Lobelia Inflata, (*Lobelia*.) A valuable emetic, antispas-



Fig. 25

modic. Dose of pulv. seeds, one to five grains. Of the tincture, one teaspoonful repeated every ten minutes until it operates. Used in all cases where emetics are indicated.

Lycopus Virginicus, (*Bugleweed*.) A decoction drunk freely will cure bleeding at the lungs.

Lythrum Salicaria, (*Loosestrife*.) Used as a mucilage instead of slippery elm.

Magnesia, (*Magnesia*.) The citrate of magnesia taken in wine-glass full doses every half hour is a cooling purge.

Magnesiæ Carbonas, (*Carbonate of Magnesia*.) Used for acidity of the stomach.

Magnesiæ Sulphas, (*Sulphate of Magnesia*.) A common but miserable purge.

Magnolia Glauca, (*Magnolia*.) Used in form of bitters, a valuable remedy in chronic ague. A decoction of this article will prevent a love of tobacco.

Malva Sylvestris, (*Common Mallow*.) Used as a mucilage. Same as slippery elm as a mucilage.

Maranta Arundinacea, (*Arrow Root Plant*.) Used in gruel for nourishment.

Marrubium Vulgare, (*Horehound*.) A syrup of this article is an excellent remedy for coughs and colds.

Maruta Cotula, (*Mayweed*.) Excellent tonic, and may be used in all cases instead of English chamomile.

Mel, (*Honey*.) Used in syrups.

Mel'a Azedarach, (*Pride of China*.) Twenty or thirty grains of the root is a good remedy for worms.

Melissa Officinalis, (*Balm*.) A tea drank freely on retiring will break up a cold.

Menispermum Canadense, (*Yellow Parilla*.) May be used freely wherever there are adhesions as the result of inflammation, as in pleurisy, &c. Dose of decoction, wine-glass full three times a day.

Mentha Piperita, (*Peppermint*.) Tea may be used in flatulency, &c.

Mentha Viridis, (*Spearmint*.) Properties nearly the same.

Menyanthes Trifoliata, (*Buckbean*.) Used in dropsy, syphilis, and necrosis. Dose, ten to twenty grains of pulv. root three or four times a day.

Mitchella Repens, (*Partridgeberry*.) An infusion drunk freely is an excellent remedy for painful menstruation.

Momordica Elaterium, (*Wild Cucumber*.) A hydragogue cathartic used in dropsy. One gill of the decoction is a dose.

Monarda Punctata, (*Horsemint*.) Used for nausea and vomiting in infusion.

Monotropa Uniflora, (*Iceplant*.) Tea drunk freely is good for St. Vitus' dance and epilepsy.

Morus Rubra, (*Red Mulberry*.) A mild diuretic. Dose, one gill of the decoction.

Moschus, (*Musk*.) A stimulant and antispasmodic. Used in typhus fever. Dose, one or two grains.

Mucuna Pruriens, (*Cowhage*.) Used for worms. Dose, twenty or thirty grains. Is a bad remedy, as it is liable to produce mucous inflammation.

Myrica Cerifera, (*Bayberry*.) May be used in all cases of scrofula, dysentery, and consumption. Dose, one tablespoonful of the syrup two or three times a day.

Myristica Moschata, (*Nutmeg*.) A good nervine. Dose, eight or ten grains.

Myrospermum Peruiferum, (*Balsam of Peru*.) Ten or fifteen drops of the tincture is a good remedy for gonorrhœa.

Myrospermum Toluiferum, (*Balsam of Tolu*.) A good remedy for coughs and colds. Dose, a teaspoonful three or four times a day.

Myrtus Pimento, (*Pimento*.) A tincture is a good remedy for wind colic. Dose, ten or twenty drops.

Mabalus Albus, (*Lion's Foot*.) The root steeped in milk is an antidote to the bite of poisonous reptiles. Dose, one gill every two or three hours.

Nectandra Rodiæi, (*Bebeeru*.) One gill of decoction of the bark, drunk three or four times a day, is a sure cure for sterility in females.

Nepeta Cataria, (*Catnip*.) An infusion of the leaves is good for colic in children.

Nepeta Glechoma, (*Ground Ivy*, *Chick Weed*.) Makes an excellent poultice for old sores.

Nymphæa Odorata, (*White Pond Lily*.) Ten or fifteen grains of the pulverized root, taken in yeast, is a sure cure



Fig. 26.

for nursing sore mouth. Also used in dysentery, leucorrhœa, &c.

Ænanthe Phellandrium, (*Water Fennel*.) A good diuretic. May be drunk freely wherever such a remedy is indicated.

Ænothera Biennis, (*Tree Primrose*.) A syrup made of this article, and used freely, is an excellent remedy in scrofula.

Oleum Morrhuæ, (*Cod-liver Oil*.) Great humbug remedy for consumption, used mostly by Allopathic physicians.

Oleum Ricini, (*Castor Oil*.) Purge. In tablespoonful doses.

Oleum Terebinthinæ, (*Oil or Spirit of Turpentine*.) A diuretic, in ten or fifteen drop doses.

Oleum Tiglii, (*Croton Oil*.) In one-eighth to one-quarter drop doses, is valuable for dropsy. In one drop doses, it is an active purge.

Onasmodium Virginianum, (*False Cromwell*.) Used in gravel. Dose, one tablespoonful of the decoction three or four times a day.

Origanum Vulgare, (*Origanum*.) Makes a good liniment for rheumatism.

Ornus Europæa, (*Manna Tree*.) In drachm doses, is a mild laxative.

Orobanche Virginiana, (*Beech Drops*.) A poultice made of the pulv. root, is said to cure cancer.

Osmorrhiza Langystilis, (*Sweet Cicely*.) Useful in coughs. A decoction may be drunk freely.

Osmunda Regalis, (*Buckhorn Brake*.) Half a pint of strong decoction, drunk on retiring, will remove obstruction of the menses.

Ostrya Virginica, (*Iron Wood*.) A half pint of decoction taken three or four times a day, will cure ague.

Oxalis Acetosella, (*Wood Sorrel*.) A salve made from the juice, is a good remedy for cancer.

Pæonia Officinalis, (*Peony*.) One or two ounces of decoction of the root is good for nervous affections.

Panax Quinquefolium, (*Ginseng*.) A decoction may be drunk freely.

Parthenium Integrifolium, (*Cutting Almond*.) Is a good diuretic: one tablespoonful of the gin tincture three times a day is useful in dropsy.

Petroleum, (*Petroleum*.) Is used for inhalation in lung disease and for liniments.

Petroselinum, Sativum, (*Parsley*.) Used in dropsy, gonorrhœa and diseases of the kidneys and bladder. Dose, one gill of infusion three or four times a day.

Phosphorus (*Phosphorus*.) One grain triturated in one hundred grains of sugar, and one grain given three or four times a day, is a cure for impotency. Also used in the last stages of typhoid fever.

Phytolacca Decandra, (*Poke*.) Is emetic, cathartic and alterative. Used in syphilis and obstinate diseases of the liver. Dose of the powdered root from one to two grains.

Picræna Excelsa, (*Quassia*.) A bitter tonic used in the form of bitters in debility.

Pimpinella Anisum, (*Anise*.) A sweetened tea is used for infantile colic, &c.

Piper Angustifolium, (*Matico*.) Active astringent. Used in all cases of hemorrhage. Dose, from one to five grains of pulv. leaves; or from ten to twenty drops of the tinct.

Piper Cubeba, (*Cubebs*.) Used in gonorrhœa, and diseases of the bladder and kidneys. Dose, ten to twenty gr. of the pulv. article.

Piper Longum, (*Long Pepper*), *Piper Nigrum*, (*Black Pepper*.) Four or five grains act as an antiperiodic in chronic ague.

Pix Liquida, (*Tar.*) Used in consumption, bronchitis, and coughs. Dose, thirty or forty drops, in honey or simple syrup.

Plantago Cordata, (*Water Plantain.*) This article has been extensively used in diarrhœa, cholera morbus, and cholera. Dose, one wine-glass full of decoction of the root, three or four times a day.

Podophyllum Peltatum, (*Mandrake.*) The crude article is seldom used, except in irritating plasters.

Polemonium Reptans, (*American Greek Valerian.*) Nervine, antispasmodic. Used in hysteria, photophobia, chorea, &c. Dose, wine-glass full of decoction every two or three hours.

Polygala Nuttallii, (*Ground Centaury.*) A syrup made of this article and taken freely, is almost a specific for incipient consumption.

Polygala Rubella, (*Bitter Polygala.*) Ten or twenty gr. is a mild stimulating purge.

Polygala Senega, (*Seneka Snake Root.*) Used as an expectorant in the form of a syrup in coughs, colds, &c. Dose, one teaspoonful three or four times a day.

Polygonum Punctatum, (*Water Pepper.*) An active emmenagogue and diuretic. Dose, of the decoction one gill three or four times a day.

Polypodium Vulgare, (*Common Polypody.*) A demulcent and anthelmintic. Dose, of the powdered plant, from one to four grains—repeated as indicated.

Polythricium Juniperum, (*Hair-cap Moss.*) A powerful diuretic. A decoction drunk freely, is a very reliable remedy for dropsy of the heart.

Populus Balsamifera, (*Balsam Poplar.*) Balm of Gilead. A gin tincture of the buds is an excellent remedy for rheumatism. Dose, tablespoonful three or four times a day.

Populus Tremuloides, (*American Poplar*.) An excellent stomach tonic.

Potassæ Bitartras, (*Bitartrate of Potassa*,) (*Cream of Tartar*.) A cooling diuretic and purge. Dose, one drachm, repeated as indicated.

Potassæ Nitræs, (*Nitrate of Potassa*,) (*Salt Petre*.) A paper soaked in a strong solution, and burnt in the room, is a good remedy for asthma.

Potentilla Canadensis, (*Five Finger*.) Boiled in milk, is an excellent remedy for dysentery. Dose, tablespoonful every half hour.

Potentilla Tormentilla, (*Tormentil*.) The dried leaves pulverized, make a good cephalic snuff.

Prinos Verticillatus, (*Black Alder*.) Antiperiodic and tonic. May be used in all cases instead of Peruvian bark.

Prunus Virginiana, (*Wild Cherry*.) A cold infusion, drunk freely, is a good remedy for chronic dyspepsia, colds, and coughs.

Ptelea Trifoliata, (*Wafer Ash*.) Taken in the form of a gin tincture, is an excellent tonic in all cases of debility.

Pteris Atropurpurea, (*Rock-brake*.) A strong decoction is said to be a reliable remedy in spermatorrhœa. Dose, one tablespoonful every two or three hours.

Pulmonaria Officinalis, (*Lung-wort*.) A syrup made of this article, is said to be an excellent remedy in pulmonary consumption.

Punica Granatum, (*Pomegranate*.) The bark is extensively used for tape-worm. Dose, twenty or thirty grains five or six times a day.

Pyrethrum Parthenium, (*Feverfew*.) Diaphoretic and mild stimulant. A decoction may be used in mild forms of fever, drunk freely.

Pyrola Rotundifolia, (*Round-leaved Pyrola*.) A decoction

tion is a metastatic remedy in measles, scarlatina, measles, and typhoid fever. Dose, tablespoonful every hour.

Pyrus Malus, (*The Apple Tree*.) Is used as a tonic, in the form of syrup, in cases of debility, &c.

Quercus Albus, (*White Oak*.) Powerful astringent; used for washes in old ulcers, &c.

Quercus Infectoria, (*Dyer's Oak*.) Used the same as white oak.

Rhamnus Catharticus, (*Buckthorn*.) Used as an emmenagogue and abortant. Dose, from one to five grains.

Rheum Palmatum, (*Rhubarb*.) Used as a purge in diarrhoea and dysentery.

Rhus Glabrum, (*Sumach*.) Powerful astringent and antiseptic. Used in aphthal leucorrhœa. Dose of the decoction, one tablespoonful every two or three hours.

Rhus Toxicodendron, (*Poison Oak*.) One drop of the tincture three or four times a day is an excellent remedy for salt rheum, erysipelas, tetter, &c.

Rhus Radicans, (*Poison Ivy*.) One or two drops of the tincture three or four times a day, is an excellent remedy for palsy, amaurosis, &c.

Ribes Nigrum, (*Black Currant*.) The bark of the root in strong decoction is an excellent wash in eruptive diseases.

Robina Pseudo-Acacia, (*Locust Tree*.) A strong decoction of the bark is emetic and cathartic. Dose, one gill.

Rosmarinus Officinalis, (*Rosemary*.) An excellent remedy in female weakness, prolapsus uteri, &c. One tablespoonful of the syrup taken three or four times a day.

Rubus Strigosus, (*Red Raspberry*.) *Rubus Trivialis*, (*Dewberry or low Blackberry*.) *Rubus Villosus*, (*Blackberry*.) Syrup of the bark of the root is a good remedy in dysentery and diarrhoea.

Rudbeckia Lanceolata, (*Thimble Weed*.) A good remedy

in enlargement of the spleen and Bright's disease. Dose, one gill of decoction three or four times a day.

Rumex Acetosa, (*Sorrel*.) The dry extract is used as a caustic in cancers.

Rumex Aquaticus, (*Great Water Dock*.) *Rumex Britannica*, (*Water Dock*.) *Rumex Obtusifolius*, (*Blunt-leaved Dock*.) *Rumex Crispus*, (*Yellow Dock*.) Used in combination with other articles in the form of a syrup for cleansing and purifying the blood.

Ruta Graveolens, (*Rue*.) A good remedy for seat worms and round worms of children. An ounce to one pint of gin. Dose, one tablespoonful at night on retiring.

Sabbatia Angularis, (*American Centaury*.) Antiperiodic, used in fevers.

Salix Alba, (*Willow*.) The catkins of the pussy willow in gin, is an antiphrodisiac. Dose, tablespoonful three times a day. The bark is used in fevers instead of Peruvian bark.

Salvia Officinalis, (*Sage*.) Used for worms and night sweats, a tea drunk freely.

Sambucus Canadensis, (*Elder*.) One of the ingredients of the alterative syrup. Good in scrofula.

Sanguinaria Canadensis, (*Blood-root*.) Good in croup, acute disease of the lungs, bronchia and liver. Dose, from one to three grains.

Sanicula Marylandica, (*Sanicle*, *Black Snake Root*.) The pulv. root two ounces added to one pint of port wine, and one tablespoonful taken three or four times a day, is good for epilepsy.

Saponaria Officinalis, (*Soapwort*.) An excellent remedy in intermittent fever. One half tea-cup full of decoction taken three times a day.

Sarracenia Purpurea, (*Sarracenia*.) Used in nervous affections. Dose, five or ten grains.

Satureja Hortensis, (*Summer Savory*.) A strong tea drunk on retiring, relieves painful menstruation.

Scilla Maritima, (*Squill*.) Eight or ten grains given three or four times a day act as a mild purge. It is also a diuretic and expectorant.

Scrophularia Nodosa, (*Figwort*.) A syrup made of this article is an excellent remedy in fever, sores, white swelling, &c.

Scutellaria Lateriflora, (*Scullcap*.) One of the best nervines. Used in St. Vitus' dance, neuralgia, hydrophobia, hysteria, &c. Dose, one gill of strong infusion three or four times a day.

Ergot, (*Spurred or Smut Rye*.) Used in five or ten grain doses as a parturient.

Sempervivum Tectorum, (*Common Houseleek*.) An ointment of this is excellent for burns. The tincture applied to the part will cure bee stings.

Senecio Aureus, (*Life Root*.) A gin tincture taken in wine-glass full doses, three or four times a day, will remove all female irregularities.

Sesamum Indicum, (*Benne*.) A tea of the fresh leaves drunk freely is a good diuretic.

Silphium Perfoliatum, (*Indian Cup Plant*.) A good diaphoretic drink in fevers: may be used freely.

Sinapis Alba, (*White Mustard*), *Sinapis Nigra*, (*Black Mustard*.) A teaspoonful of pulv. seed acts promptly as an emetic.

Smilax Officinalis, (*Sarsaparilla*.) Used for scrofula in the form of syrup.

Sodæ Boras, (*Borate of Soda, Borax*.) Ten grains dissolved in six ounces of water, injected into the rectum, will cure impotency, repeated as indicated.

Sodæ Carbonas, (*Carbonate of Soda*.) Three or four grains may be used as an antacid.

Hypophosphite of Soda.—Ten grains triturated in six ounces of simple syrup is an excellent remedy for chronic dyspepsia. It is also good in lung affections, debility of the nervous system. A dose of the pure article is from one to two grains. It also constitutes one of the ingredients of the compound syrup of hypophosphites.

Sodii Auro-Terchloridum, (*Chloride of Gold and Soda*.) This article is used in syphilis, cancer, necrosis, mercurial diseases and tuberculous consumption. Dose, from one sixteenth to one eighth of a grain in simple syrup.

Sodii Chloridum, (*Common Salt*.) One fourth teaspoonful taken before each meal is one of the best known remedies for chronic dyspepsia.

Solanum Dulcamara, (*Bitter Sweet*.) A tea of this article drunk freely is an excellent remedy for diarrhœa.

Solanum Nigrum, (*Garden Night Shade*.) An ointment is used for discussing indolent tumours. It should be made from the fresh leaves.

Solidago Odora, (*Sweet Scented Goldenrod*.) A tea is said to be a valuable remedy for palpitation of the heart, depending upon nervous debility.

Solidago Rigida, (*Hardleaf Goldenrod*.) Tonic and astringent. One gill of decoction two or three times a day.

Spigelia Marylandica, (*Pinkroot*.) Five or ten grains followed by a dose of podophylla will remove lumbricoid worms.

Spirea Tomentosa, (*Hardhack*.) Used for dysentery and diarrhœa in children, in the form of a syrup. Dose, tablespoonful every hour.

Spiritus Pyroxylicus, (*Pyroxylic Spirit*.) Wood naphtha. An excellent remedy for catarrhal affections of the head, bronchitis and consumption. It may be inhaled or may be given internally in fifteen to thirty drop doses, every two or three hours.

Statice Caroliniana, (*Marsh Rosemary*.) Used in leucorrhœa, prolapsus uteri, dysentery, and chronic diarrhœa. Dose, from ten to twenty grains.

Stellaria Media, (*Chickweed*.) A syrup of this article is good in whooping-cough, bronchitis, and asthma. Dose, a tablespoonful three or four times a day.

Stillingia Sylvatica, (*Queen's Root*.) Used mostly in a compound syrup. Useful in all diseases where an active alterative is required.

Sulphur.—Used in most acute eruptive diseases. Dose, from one to ten grains.

Symphytum Officinale, (*Comfrey*.) Is a good mucilaginous drink in coughs, colds, &c.

Symplocarpus Fœtidus, (*Skunk's Cabbage*) The acetic tincture is valuable in whooping cough and spasmodic asthma. The pulverized root is also an active spasmodic. Dose of tincture, one drachm; of the powder, ten to twenty grains.

Tanacetum Vulgare, (*Tansy*.) A decoction is a valuable emmenagogue. It also improves digestion. Dose, wine-glass full three or four times a day.

Taraxacum, *Dens Leonis*, (*Dandelion*.) The extract or syrup is an excellent remedy for chronic disease of the liver. It may be taken freely.

Tephrosia Virginiana, (*Hoary Pea*.) It is a powerful alterative; used in syphilis and all cases where an alterative is required. Dose, from ten to twenty grains of the pulverized root.

Thuja Occidentalis, (*Arbor Vitæ*.) Used in intermittent fever, chronic diseases of the spleen. Dose, one-half pint of decoction three times a day.

Thymus Vulgaris, (*Thyme*.) A strong infusion, drunk freely, is a diaphoretic.

Trifolium Pratense, (*Red Clover*.) The extract is used for cancers.

Trillium Pendulum, (*Bethroot*) An excellent remedy in low forms of fever accompanied with hemorrhage. Dose, five to ten grains.

Triosteum Perfoliatum, (*Fever-root*.) The gin tincture taken in wine-glass full doses three or four times a day, is a good remedy for chronic rheumatism.

Tussilago Farfara, (*Colt's Foot*.) A decoction is used for coughs and colds.

Typha Latifolia, (*Cat-tail Flag*.) A decoction of the root is an excellent remedy in scarlatina and typhoid fever. Dose, tablespoonful every two or three hours.

Ulmus Fulva, (*Slippery Elm*.) Used as a cooling drink and for poultices.

Urtica Dioica, (*White Nettle*.) A decoction is good for sterility, impotency, and weakness of the sexual organs. Dose, half gill three or four times a day.

Uvaria Triloba, (*Pufan*.) A strong decoction taken in gill doses three or four times a day, cures epilepsy.

Uvularia Perfoliata, (*Bell-wort*.) Nervine. Used in neuralgia and hysteria. Dose, twenty or thirty grains three or four times a day.

Vaccinum Frondosum, (*Blue Whortleberry*.) A syrup of this is good for gravel.

Valeriana Officinalis, (*Valerian*.) Nervine. Used in all nervous affections. A decoction may be drunk freely.

Veratrum Viride, (*American Hellebore*.) A tincture is used in all forms of fever and inflammation where there is a high grade of action. Dose, from one to ten drops.

Verbaseum Thaseus, (*Mullein*.) A decoction drunk freely allays pain in mumps and prevents metastasis.

Verbena Hastata, (*Vervain*.) Good in rheumatism, gout,

and piles. Dose of the tincture, one drachm three or four times a day.

Verania Fasciculata, (*Iron Weed*.) A decoction used freely, is a good remedy for chronic dyspepsia.

Veronica Officinalis, (*Speedwell*.) A syrup is valuable in land scurvy or purpura. Dose, tablespoonful four or five times a day.

Viburnum Opulus, (*High Cranberry*.) One of the most powerful antispasmodics known. Used in tincture and decoction, in fits and spasms. Dose of decoction, tablespoonful every half hour; of tincture, one drachm as indicated.

Viburnum Prunifolium, (*Black Haw*.) A decoction is good in incontinence of urine.

Viola Pedata (*Blue Violet*.) A good poultice in rattlesnake bites, stings of insects, &c.

Viscous Flavescens, (*Mistletoe*.) Said to be valuable in palsy.

Xanthorrhiza, (*Yellow Root*.) Is a tonic used in the form of bitters.

Xanthoxylum Fraxienum, (*Prickly Ash*.) Good in rheumatism, cholera morbus, and cholera. A tincture of the berries and bark is used.

Zinci Sulphas, (*Sulphate of Zinc*.) Used as a caustic in cancers.

Zingiber Officinale, (*Ginger*.) A stimulating diaphoretic—taken freely.

PART VII.

PHARMACY.

EVERY family should obtain a case of concentrated medicines, in order to make their own prescriptions when medical aid is indicated, unless the nature of the case is such that it can only be understood by a physician well versed in his profession. The non-professional individual, before attempting to prescribe for a patient, should carefully observe all the symptoms present, and as carefully compare them with those described in this work, or by other reliable authors; for unless the indications to be fulfilled are fully understood, it is far better to leave the disease to the unaided efforts of nature, than to attempt medical interference, bearing in mind that unskilful medication always lessens the chances of recovery. The next duty is to fully understand the properties of the remedy to be used, and its preparation for administration. In the use of the concentrated remedies described in this work, they should be triturated with sugar, by adding ten grains of the article to be used to one hundred of pure white sugar. Place both in a wedge-wood mortar, and triturate for thirty or forty minutes, or until every particle of the medicine is thoroughly incorporated with the sugar. The doses recommended in this work mostly have reference to the triturated article. It will be noticed, that where the medicine is thus prepared, a much less quantity is required than when given in a crude state; besides, when the articles are taken into the stomach in a crude state, they produce local irritation, frequently causing rejection, or producing constitutional symptoms, which very much lessen their curative powers.

The quantity to be administered must depend altogether upon the age, temperament, constitution, &c., of the patient. For the proportionate doses of different ages, the reader is referred to the table of doses, as modified by age, in another part of this work. The time required for an ordinary dose of triturated medicine to pass into the circulation is from one to two hours; consequently, if the first dose is not sufficient to accomplish the object for which it was given, it may be repeated every one or two hours until the desired effect is produced. Pure soft water is the best material in which to mix the medicine for administration; all jams and jellies should be carefully avoided, as they frequently entirely neutralize the medicinal properties of the article. If the medicine is a tincture, as aconite or veratrum, it may be largely diluted in soft water, as one half drachm of the tincture may be added to one half tumbler of water, and one tablespoonful given every fifteen or twenty minutes until the requisite quantity has been taken. All the tinctures may be taken in this way. In acute diseases, but one kind should be given at once, unless there is a marked indication for some other remedy which is compatible with the one being taken; or, unless the medicines possess the same properties, and one be mixed with the other to modify its action; as quinine and cornin, both being antiperiodics, when combined, one facilitates the action of the other; so with many other remedies. But, in domestic practice, unless the prescriptions are followed as laid down in connexion with each separate disease, the remedies had better be used one at a time. The best method of using crude articles of medicine, is in the form of an infusion or syrup.

To make an infusion of any article of medicine. Take one pint of warm or cold water, for one ounce of the remedy, much care being taken to prevent boiling or overheating, as this frequently destroys the virtue of the remedy.

Syrup.

In chronic diseases, syrup is often the best form of administering medicine, as much benefit is derived from the sugar it contains; frequently the sugar is more beneficial than the medicine.

Sugar serves the purpose of combustion in the lungs and extreme capillaries, thereby increasing the animal temperature, promoting secretion, excretion, &c. It is stated, upon good authority, that the negroes on the sugar plantations become very fat and free from disease during sugar boiling. And, as I have already stated, in the treatment of consumption, sugar is of great value. The best method of preparing syrup for domestic practice, is to add one pound to one pint of strong infusion.

Tinctures.

The method of preparing tinctures for domestic practice is to add two ounces of the green vegetable to one pint of good pure whisky, and let it stand fourteen days, when it should be strained and bottled for use.

Pills.

The most uncertain method of using medicines is in the form of pills, as they frequently become dry and hard, requiring a long time to digest; they also frequently lose their strength by standing. Yet it is sometimes advisable to use some of the extracts in the form of a pill. They may be made by rolling in pure starch or pulverized liquorice, and only as fast as used.

Purgatives.

Purgative medicines are those which increase the alvine evacuations, or increase the peristaltic action of the bowels. This class of medicines, although of great service in many diseases, is also capable of producing very bad effects.

The constant use of purgative medicines has a tendency to irritate and derange the action of the bowels. They are

mostly useful in case of obstinate constipation; in most brain affections; in inflammation of the peritoneum; and in some other diseases; but in typhoid fever, inflammation of the stomach and bowels, and in all cases of great debility they are utterly inadmissible. Among the best purgatives, are Euonymin, Podophyllin, Iridin, Neutralizing Cordial, and Anti-bilious Physic.

Emetics.

Emetics are those remedies which evacuate the stomach. They are serviceable in the commencement of many fevers, also in some chronic diseases, and always when the stomach is loaded with some foreign substance. The best medicines for emetics are Lobelia, Blood-root, and Ipecac.

Before administering an emetic, the patient should drink a moderate quantity of some warm tea, as chamomile, catnip, ginger, or Thomson's composition. If lobelia is given, from one half to one teaspoonful of the tincture may be taken every five or ten minutes, until it operates as desired. The tincture of blood-root and ipecac may be used in larger quantities, say in teaspoonful doses. The pulverized seed of lobelia may be given, by adding one half teaspoonful to one teacupful of warm water, and, after steeping ten or fifteen minutes, one tablespoonful may be taken every ten minutes until the desired effect is produced. Thirty grains of pulverized ipecac, and sixty grains of pulverized blood-root, may be used in the same way.

Diuretics.

Diuretics increase the secretion and flow of urine. These remedies are often of great value in the treatment of disease. They operate with the greatest efficiency when largely diluted with warm water, and the surface is kept cool. Among the best diuretics are Marsh-mallow, Clivers, Indian Hemp, Queen of the Meadow, and Dwarf Elder.

Diaphoretics.

These are medicines which lessen the heat, by increasing the moisture of the surface of the body. They are serviceable in all cases of fevers. Aconite and Veratrum are among the best diaphoretics.

Expectorants.

Expectorants increase the discharge from the mucous membrane of the bronchi and lungs. They are valuable in some cases of acute and chronic affection of these organs. But in all cases of true phthisis they are very injurious. Among the best expectorants are Lobelin, Sanguinarin, and Eupatorin.

Sinapisms, or Mustard Poultices.

These are prepared by adding one tablespoonful of mustard to three of flour, mixing with equal parts of vinegar and water. They are beneficially used to attract the blood from the deep-seated to the superficial capillaries. They are also applied to the spine and nape of the neck in inflammation of the brain.

Cataplasms, or Poultices.

May be made by moistening bread-crumbs with milk. They may also be made of flaxseed. Roasted onions, snake-root, &c., may be used for poultices. They are useful in nearly all cases of local inflammations.

Clysters, or Injections.

When these are used merely to act upon the bowels, warm water or flax-seed water may be used. Any medicines may be thus administered when the stomach will not tolerate them.

Fomentations.

Cloths wrung out of hot water, or an infusion of any medicinal substance, is applied for local congestion or inflammation. In these applications, the adjacent clothing should be protected from moisture by oil-silk.

Plasters.

These are made by compounding medicines with gums, resins, &c.

The Irritating Plaster.

This is made by using boiled tar, one pound; Burgundy pitch, one-half ounce; white gum turpentine, one ounce; rosin, two ounces. Melt the tar, rosin, and gum, together, remove from the fire, and add finely pulverized mandrake root, bloodroot, pokeroor, Indian turnip, each one ounce. This plaster is used extensively in all cases where counter-irritation and revulsives are indicated; as in rheumatism, neuralgia, and chronic affections of the liver and lungs. By Eclectic physicians, this is used in many cases where blisters are used by the "old school," and experience has shown it to be far superior.

Adhesive or Strengthening Plaster.

Take of rosin, one pound; beeswax, one ounce; Burgundy pitch, one ounce; mutton tallow, one ounce. Melt them together, and add olive oil, pulverized camphor, and sassafras oil, of each one-sixth of an ounce; West India rum, one fluid ounce. Stir well together, pour into cold water, and form it into rolls with the hands. This is an excellent plaster in weakness of the joints, rheumatism, weak back, weak chest, ulcers, &c.

Ointments.

An ointment for the cure of burns may be made as follows: take fresh butter, one-half pound; yellow dock root, cut in small pieces, one ounce; fresh raspberry leaves, one-half ounce; white wax, one ounce. Melt the butter and wax together, add the raspberry leaves and dock root, simmer fifteen or twenty minutes, and strain while warm. This is an excellent ointment for burns and scalds.

Expectorant, No. 1.

Take balsam tolu, two drachms; balsam benzoin, one drachm; saffron, one-half drachm; honey, two drachms;

hot alcohol, one pint; digest seven days. Dose, a teaspoonful.

Expectorant, No. 2.

Take lobelia tincture, the seeds of skunk cabbage, sanguinaria, colts' foot, asclepias tuberosa or pleurisy root, equal parts, one ounce; alcohol, three pints. Mix, let stand for two days. Dose, teaspoonful in simple syrup.

Expectorant, No. 3.

Take bloodroot, lobelia herb, skunk cabbage root, asarabacca, (hazlewort,) pleurisy root, each coarsely powdered, one ounce; alcohol, three pints; water, one pint. Let it stand fourteen days,—shake frequently.

For croup, whooping-cough, bronchitis and asthma, this is a valuable preparation, and is excellent as an emetic for children, being gentle, safe and certain. It is also good as an expectorant, tightness across the breast, and where there is an excess of phlegm.

Directions.—In croup, for children one year old, give one-half tablespoonful in a tablespoonful of molasses, and repeat every fifteen minutes until vomiting is produced; after which a teaspoonful may be given every hour or two as required; the vomit to be repeated two or three times a day.

Restorative Bitters, No. 1.

Take tamarac bark, six pounds; prickly ash berries, four pounds; black cherry bark and root, three pounds; tansy, one pound; pulverize, and to one and a half ounces add boiling water, one pint; sugar, one pound; gin, one-half pint. Mix. Dose, wine-glass full three times a day.

Restorative Bitters, No. 2.

Take tamarac bark, two pounds; prickly ash bark or berries, one pound; wild cherry bark, one pound; Seneca snake root, one-fourth pound; tansy, one-fourth pound; boiling

water, two and a half pints. When cool, strain and add gin, one pint; molasses, one-half pint. Dose, one tablespoonful three times a day.

Wine Bitters, No. 1.

Take golden seal, white wood, wandering milk weed, each one ounce; capsicum, one-half ounce; wine, two pints; mix.

Wine Bitters, No. 2.

Take comfrey, Solomon seal, spikenard, sassafras, and orange peel, each one ounce; columbo gentian, and cinnamon, each one-half ounce. Mix. Add two ounces to two pints of wine. Dose, tablespoonful three or four times a day.

Tonic Wine Bitters, No. 3.

Take wild cherry, gentian, columbo, and black alder, each one ounce; orange peel, one ounce; boiling water, one pint; loaf sugar, one pound; stir. When cold, add sweet wine, four pints; bottle tight. Dose, wine-glass full three times a day.

Valuable Emetic, No. 1.

Take lobelia, two drachms; bloodroot, one drachm; skunk cabbage, one drachm; ipecacuanha, two drachms; Cayenne pepper, half drachm. Mix, and give a teaspoonful in warm herb tea: if the first dose is rejected, immediately repeat. Warm water or tea may be drunk freely afterward.

Acetic Emetic Tincture, No. 1.

Take lobelia seed, sanguinaria or bloodroot, and skunk cabbage, each one-half pound; vinegar, two pints. Tincture for three weeks. Dose, one tea or tablespoonful in mint tea.

For Piles, No. 1.

Take henbane and lard, equal parts, sufficient quantity. Rub well together. Anoint the parts.

Pile Ointment, No. 2.

Take extract of stramonium and tobacco, each one ounce; tannin, ten grains. Make an ointment, and bathe the parts.

Ointment for Piles, No. 3.

Take tannin, one drachm; lard, one ounce; oil of fireweed, thirty drops; mix. Form an ointment. Use after every passage. The above remedy, if the bowels are kept open with the pile electuary, is a sure cure.

Pile Electuary.

Take of cream of tartar, one ounce; electuary of senna, one ounce; flower of sulphur, one-half ounce; leptandrin, one drachm; euonymin, two drachms; simple syrup, one pint. Dose, tablespoonful twice a day, morning and evening. The above is designed to be used instead of the ordinary pile electuary. When used in connexion with pile ointment, No. 3, it is almost a specific for all forms of prolapsus ani and piles.

Concentrated Liniment, No. 1.

Take oil of origanum, oil of hemlock, oil of cajeput, gum camphor, of each one pound; African red pepper, half pound. Digest two weeks, express and filter, and add of pure white soap sufficient to form a liniment. Very useful in painful affections.

Liniment, No. 2.

Take tincture capsicum, two ounces; oil origanum, two drachms; oil cinnamon, one drachm; tincture opium, three drachms; tincture camphor, one drachm; spirits ammonia, three drachms; turpentine, one-half ounce. Mix. Good for rheumatism.

Dr. D. Ecker's Healing Liniment, No. 3.

Take spike oil, seneka oil, stone oil, Barbadoes tar, spirits turpentine, of each equal parts. For sprains, bruises, swecny, &c., add to it spirits camphor, one ounce; Cayenne pepper, one drachm.

Valuable Stimulating Liniment, No. 4.

Take compound tincture of myrrh, Dr. Thomson's No. 6,

one pint; oil of origanum, two ounces; oil of hemlock, three ounces; oil turpentine, four ounces; Cayenne pepper, one ounce. Mix and shake well. This is a very useful application for rheumatism, stiffness of joints, &c. It may be used with advantage in crysipelas or black tongue, by rubbing the throat with it frequently. It may also be applied to the chest for diseases of the lungs, bronchial affections, &c. By applying a mullein leaf to the surface where this liniment has been applied, a blister will form immediately.

Goitre Liniment, No. 5, Dr. D. Ecker.

Take four ounces of nitrate of potassa, put into one quart of rain water, let it dissolve, then add two ounces of spirits of nitre, and one ounce of sulphuric acid, and four ounces of tincture of opium; then bottle for use. Wet the part affected two or three times a day until cured.

Counter-Irritating Liniment, No. 6.

Take alcohol, four ounces; oil stillingia, one drachm; oil capsicum, ten drops; croton oil, five drops; mix. Apply with a small sponge. Good in bronchitis, pneumonia, consumption, chronic rheumatism, and in all diseases where counter-irritation is indicated. Enough should be applied, two or three times a day, to keep the surface slightly irritated.

For Hemorrhage in Typhoid Fever.

Take nitrate silver, one grain; pulverized matico, ten grains; pulverized acacia, thirty grains; mix. Form in sixteen pills. Dose, one every hour.

Antiperiodic in Congestive Bilious Fever.

Take sulphate of quinine, thirty grains; tannin, ten grains; capsicum, twenty grains; camphor, three grains; pulverized acacia, a sufficient quantity. Mix, and form sixteen pills. Take one every hour during the intermission.

Diaphoretic Powder.

Take bayberry bark, sumach berries, bloodroot, and golden seal, equal parts, sufficient quantity. Add one ounce to one pint of water. Dose, tablespoonful every twenty minutes.

Febrifuge Powder.

Take asclepias tuberosa or pleurisy root, fever root, lobelia herb, equal parts, one ounce; camphor, one drachm. Dose, three to five grains every two hours.

For Typhoid Fever in the Last Stage.

Take new oil of turpentine, two fluid ounces; bi-carbonate of soda, one drachm; pulverized gum Arabic and pulverized sugar, each two ounces; compound spirits of lavender, one-half fluid ounce; camphor water, four fluid ounces; peppermint, three fluid ounces. Mix, form an emulsion. Take a tablespoonful every two hours.

Tincture of aconite or tincture rhus may be added to this. Mix, and give as the case requires.

Antiperiodic in Fevers, No. 1.

Quinine, fifteen grains; muriatic acid, one-half drachm; essence tansy, one-half ounce; simple syrup, one ounce and a half; mix. Dose, teaspoonful every hour. Commence 15 hours before the paroxysm.

Antiperiodic in Fevers, No. 2.

Take extract cornus Florida, two drachms; piperin, twenty grains; make forty pills. Dose, one every hour for fifteen hours before the paroxysm.

Another Antiperiodic in Fevers, No. 3.

Take quinine, piperine, each fifteen grains; podophyllin, one grain; make fifteen pills. Dose, one every hour for fifteen hours before the paroxysm.

Another Antiperiodic in Fevers, No. 4.

Take prussiate of iron, twenty grains; quinine, twenty grains; capsicum, six grains; divide into six powders. Dose, one every three hours.

For Hernia.

Take hemlock bark, white oak bark, rock brake root, green ozier. Make an extract, then make into plasters.

For Softening of the Spine.

Take valerianate of ammonia, twenty grains; hydro-alcoholic extract of nux vomica, two grains; hydro-alcoholic extract of scutellaria, twenty grains. Mix, form in sixteen pills. Dose, one three times per day.

Emmenagogue.

Take white turpentine, three drachms; sulphate of iron, one drachm. Make a pill of common size. Dose, one three times a day.

Sudorific Tincture.

Take ipecacuanha, one ounce; snake root, one ounce; burdock seeds, one ounce; common saffron, half an ounce; gum camphor, four drachms; Holland gin, one quart. Digest fourteen days, then filter. Dose, fifteen to thirty drops.

Painless Cancer Remedy.

Take white wax, one ounce; balsam fir, two ounces; chromic acid, one ounce. Melt the wax and balsam together, and add the acid while cooling. This is one of the most valuable cancer remedies known. Before applying it, the cuticle should be removed by blister salve, and the remedy used as directed under the head of cancer.

Belladonna in Scarlet Fever.

Take three grains of extract of belladonna in one ounce of cinnamon water. Dissolve by triturating in a mortar, and

give *three drops* in sugar or sweetened water, to a child one year old, increasing the dose one drop for each additional year in the age of the patient. In this minute dose, it can do no harm, and the bulk of evidence is in its favour.

For Erysipelas.

Take sulphate of cinchona, ten grains; sulphate of quinine, twenty grains; muriatic tincture of iron, one drachm; water, two ounces. Mix the water, cinchona, and quinine, and then add tincture of iron. Dose thirty drops.

For Salt Rheum.

Take molasses, one pint; sulphur, cream of tartar, one-half pound; rhubarb, one ounce; nitrate of potassa, one ounce. Mix. Dose, tablespoonful.

Cure for Warts.

Take carrots, and scrape or grate them, and add salt,—then apply to the wart. It is said to be a sure cure.

For Loss of Voice.

Take lobelia seed, myrrh, sanguinaria, equal parts, one ounce; black cohosh, one drachm. Dose, three to five gr. every two hours.

Parturient Syrup.

Take boneset, high cranberry, queen of the meadow, squaw vine, and valerian, equal parts, one pound. Make four quarts of syrup, add sugar and spirits to keep. Dose, wine-glass full twice a day. This must not be boiled.

Alterative Syrup.

Take burdock and sarsaparilla, each one pound; yellow parilla, guaiacum, and five leaf ivy, equal parts, three-quarters of a pound; elder flowers, one-half pound. Mix. Infuse, and make into four quarts of syrup. Dose, wine-glass full three times a day.

Retention of Urine.

Take root of queen of the meadow, bark of dwarf elder root, marsh mallow root, mountain pink, (the herb,) of each in powder, one ounce. Steep the compound in two quarts of water four hours, then add four pints of Holland gin, heat it till it boils, then, when cold, sweeten with honey. This compound will be found useful in all urinary difficulties. Dose, in severe cases, a wine-glass full every hour, until relief is obtained.

For Ague, No. 1.

Take common salt, two drachms; quinine, twenty grains; white pine turpentine, thirty grains; iodide of potassium, ten grains; triturate, mix. Divide into sixteen powders. One powder every hour, repeated every six days.

For Ague, No. 2.

Take quinine, thirty grains; cream tartar, one ounce; cloves, (pulverized,) one ounce; whisky, one pint; mix, and let it stand twenty-four hours. Dose, one tablespoonful every hour during the intermission until two or three hours previous to the time for the chill to return, when it should be given once in half an hour, and the patient put to bed and kept warm, at the same time taking some warm sweating teas, as catnip, peppermint, pennyroyal, &c. This should be continued until two or three hours after the period for the chill.

For Ague, No. 3.

Take brandy, one pint; spirits of camphor, one ounce; cloves, half an ounce; jalap, half an ounce; Peruvian bark, two ounces; Canada snake root, one ounce; water, one pint. Put the cloves, jalap, Peruvian bark and snake root in the water, and boil to one-half pint, strain and add to the brandy. Dose, one tablespoonful three times a day.

Remedy for Hooping-Cough, No. 1.

Take tincture of the bark of red root, ceanothus, two ounces; bloodroot, one ounce; black cohosh, one ounce; lobelia, half an ounce; mix. Dose for a child one year old, fifteen to twenty drops in cold, sweetened water, and gradually increase. This is a good tincture for cough; but should not be used except in the absence of all inflammatory symptoms.

Prescription for Hooping-Cough, No. 2.

Take of carbonate of potass, one scruple; of powdered cochineal, ten grains; of white sugar, one drachm; of distilled water, four ounces. Two teaspoonfuls to be given three or four times a day. Occasional emetics of lobelia must also be given.

For Asthma, No. 1.

Take sulphate of quinine, two drachms; glacial phosphoric acid, one drachm; protocarbonate of iron, one ounce. Mix. Make three grain pills. Dose, one four times a day.

For Asthma, No. 2.

Take glacial phosphoric acid, one half drachm; quinine, two scruples; extract cannabis indica, thirty grains; pulverized lobelia seed, twenty grains. Make three grain pills. Dose, two every three hours.

For Asthma, No. 3.

Take lobelia seed, pulverized, one ounce; cramp bark, pulverized, two ounces; Jamcson weed seed, bruised, half an ounce; red pepper, pulverized, half an ounce; skunk cabbage balls, bruised, one ounce; blood root, pulverized, half an ounce; strong alcohol, five pints. Let stand fourteen days—shake frequently. Dose, from twenty to sixty drops three times a day, or during a paroxysm as often as required.

Recipe for Dysentery, No. 1.

Take neutralizing mixture, six ounces; tincture of catechu, one ounce; essence of winter-green, one ounce; sulphuric ether, two ounces. Dose, one teaspoonful every hour or two until the discharges are arrested. It should not be given until the fever is controlled by aconite, and the stomach and bowels are regulated by proper medicine.

Recipe for Dysentery, No. 2.

Dr. L. E. Jones, of Cincinnati, uses this formula for dysentery. Take urtica dioica, (nettle root,) one pound; blackberry root, one pound; wild cherry bark, three ounces. Make a strong decoction—strain, and add four to six pounds of sugar, and form syrup, and then add one pint of brandy to every gallon of syrup. Dose, for an adult from half to one wine-glass full five or six times a day, or oftener, as occasion may require.

This article will be found very effectual in the treatment of all bowel complaints.

Valuable Domestic Remedy for Dysentery, No. 3.

Take hot water, one-fourth of a pint; vinegar, half pint. Mix, and then continue to add common salt as long as the solution will dissolve it. Dose, for an adult, one tablespoonful every hour until the stools cease to be tinged with blood, or it operates freely on the bowels.

For Dysentery, No. 4.

Take of the best castor oil, two fluid ounces; new oil of turpentine, one-half fluid ounce; bicarbonate of soda, two drachms; pulverized gum Arabic and pulverized white sugar, each one ounce; compound spirits of lavender, one fluid ounce. Mix, and take a tablespoonful every two hours.

Dysentery Physic, No. 5.

Take leptandrin and hydrastin, each one ounce; spring water, one pint and a half: boil down to one pint, then add

soda, one ounce; white sugar, one half pound. Take a tablespoonful as often as the stomach will bear. Aromatics may be added.

Dr. I. G. M. Goss uses this Formula in Dysentery, No. 6.

Take castor oil, half ounce; compound syrup of rhubarb, one ounce; fluid extract of leptandrin, half ounce; oil of turpentine, one drachm; gum Arabic, one drachm; essence lemon, sufficient quantity. Mix. Dose, one or two tablespoonfuls every three or four hours.

Or this may be substituted for the one above.

Take fluid extract butternut, half ounce; compound syrup of rhubarb, half ounce; fluid extract leptandrin, one-fourth ounce. Dose, from one tablespoon to four tablespoonfuls every three hours.

Injection for Dysentery.

Tannin, one drachm; hydrastin, one-half drachm; morphine, two grains; starch, six ounces; spring water, one pint. Mix. Make into six ounce injections. One after every discharge.

For Scald Head, No. 1.

Take indigo weed, poke, and spikenard, each sufficient quantity: simmer in lard; strain, and add sulphur: stir until cold.

For Scald Head, No. 2.

Take straw or wild rye, and burn to ashes; burdock, yellow dock, and macrotis, each one ounce: boil the roots, strain, and add gunpowder, one ounce: add two ounces of the ashes, and boil to a salve.

Another, No. 3.

Take tobacco, one-half pound; water, four pints: boil down to one-half pint; then add one tablespoonful of copperas; honey, one-half pint; Castile soap, one ounce; bees wax and rosin, each one ounce: simmer to a salve, and stir until cold.

For Gonorrhœa, No. 1.

Take extract horse radish leaves, and extract American Indian hemp flowers, each twenty grains; solid copaiba, forty grains. Mix, and form three grain pills. Use as often as indicated.

For Gonorrhœa, No. 2.

Take copaiba, tincture of cubebs, and syrup of uva ursi, of each two fluid ounces; gum Arabic, pulverized, two ounces; cinnamon water, sixteen fluid ounces. Mix; form an emulsion, and take one tablespoonful three times a day.

For Gonorrhœa, No. 3.

Take copaiba, one half of a fluid ounce; compound fluid extract of dioscorea, four fluid ounces; oil of spearmint, eight drops; pulverized gum Arabic, two ounces; spring water, five fluid ounces. Mix; form an emulsion, and take a tablespoonful three times a day.

Ointment for Ulcers, No. 1.

Take sulphate of zinc, two ounces; hydrastis, one ounce; mandrake root, half ounce. Fill the ulcer, and let it remain as long as can be borne.

Eseharotic for Ulcers, No. 1.

Take sulphate of iron, twenty grains; pulverized bayberry, ten grains; hydrastin, ten grains; white sugar, thirty grains; mix, triturate. Apply twice a day.

Salve for Healing Ulcers, No. 1.

Take balsam of fir, two ounces; morphine, ten grains; sulphate of zinc, ten grains; extract of conium, twenty grains; quinine, thirty grains; mix. Form an ointment.

Salve for Indolent Ulcers, No. 1.

Take white wax, one drachm; balsam of fir, one-half drachm; creasote, three drops. Mix, and form a salve.

Another, No. 2.

Take balsam copaiba, one drachm; balsam of fir, one-half drachm; white wax, one-half ounce. Melt the wax and add the balsam. Stir until cold.

Liniment to Bathe Around Ulcers, No. 1.

Take iodine, six grains; white of two eggs; tannin, ten grains; mix. Rub well together in a mortar. Apply three times a day.

Another, No. 2.

Take camphor, thirty grains; alcohol, one pint; oil of turpentine, two ounces; mix.

For Uterine Debility, No. 1.

Take prickly ash berries, black ash bark, white wood, boxwood, sassafras, black cherry, mountain flax white root, each one pound; bloodroot, two ounces; lady slipper, eight ounces; pulverize, add queen of the meadow and nunqua. Dose, ten grains three times a day.

For Uterine Debility, No. 2.

Take pulverized poplar bark, half pound; bethroot, half pound; false unicorn root, (or devil's bit,) half pound; raspberry leaves, one pound; black whortleberry, one pound; bark of boxwood, half pound; cinnamon bark, four ounces; nutmeg, two ounces; diluted alcohol, three gallons. Macerate ten days—filter, and add sugar enough to form a syrup. Dose, a tablespoonful three times a day.

Dr. Morrow's Antidyspeptic Pill, No. 1.

Take extract podophyllin, extract gentian, extract boneset, equal parts, two ounces; oil of cloves, twenty drops; pulverized lobelia seed and capsicum, equal parts, one ounce; Castile soap and gamboge, equal parts, four ounces; aloes, eight ounces. Mix, form in pills. Dose, one to four.

Alterative Syrup, No. 1.

Take burdock and yellow dock, equal parts, one pound; five leaf ivy, *scrofularia marylandica*, equal parts, one-half pound; blue flag and poke, equal parts, four ounces. Make eight quarts of syrup. To each pint one drachm of iodide of potassium may be added. Dose, one tablespoonful three times a day.

Alterative Syrup, No. 2.

Take sarsaparilla and burdock, each one pound; yellow parilla, three-fourths pound; guaiac shavings, three-fourths pound; elder flowers and sassafras, each one-half pound; blue flag and dandelion, four ounces; five leaf ivy, three-fourths pound; prickly ash berries, one-fourth pound; wild turnip, one-fourth pound. Make three gallons of syrup. The sassafras and turnip must not be boiled. Sugar, one pound to each pint of syrup; spirits, four quarts. Dose, tablespoonful three times a day.

Cathartic, No. 1.

Take extract of iris versicolor or blue flag, extract of gentian and bitartrate of potassa, equal parts. Mix, and take one drachm every two hours.

Cathartic, No. 2.

Take mandrake root, black root, senna leaves, and best ginger, equal parts. Pulverize and mix. Dose, forty to eighty grains. This powder makes an excellent cathartic in bilious fevers, deranged liver, rheumatism, &c.

Cathartic Pill, No. 3.

Take bloodroot, two drachms; cloves, one ounce; podophyllin, one ounce; gamboge and gum myrrh, each two ounces; gum camphor and capsicum, each one ounce; extract of butternut, a sufficient quantity to form a pill mass. Make a pill of common size, and take from three to five for a dose.

White Liquid Physic, No. 1.

Take sulphate of soda, half pound; water, one and a half pints; dissolve, and then add nitro-muriatic acid, two fluid ounces; powdered alum, one drachm and eight grains. Dose, tablespoonful.

Nerve Tonic.

Take lady slipper, four ounces; ginseng, two ounces; two nutmegs. Pulverize fine, and mix the whole. Dose, one tablespoonful; or steep one ounce in a pint of hot water, and give three or four large spoonfuls, or more, if circumstances require. It eases pain and gives tone to the nervous system.

For Neuralgia.

Dioscorin, two grains; gelsemin, one-half grain; hyoscyamin, three grains; valerianate of quinine, twenty gr.; white sugar, thirty grains. Triturate; mix; divide into ten powders. Take one every hour.

External Application for Neuralgia.

Tincture aconite, one drachm; chlora percha, one ounce. Mix, and shake well. Apply to the part until a thick coating is formed.

For Gravel.

Take bark of sweet apple tree, black currant, Jacob's ladder, queen of the meadow, and egg plant, equal parts. Make a decoction, and drink freely of it.

Red Drops.

Take sudorific drops, saffron, Virginia snake root, and burdock root, equal parts, four ounces; oil of pennyroyal, two ounces; alcohol, two pints. Mix. Dose, teaspoonful every hour.

Compound Syrup of Helianthus.

Take five pounds of the helianthus seed, finely pulverized, to which add a sufficient quantity of water to macerate well;

let this stand five days, then use a displacer, having the mass boiling hot; to this after being strained, add three gallons Holland gin, the very best; then add twenty-four pounds of loaf sugar; take of marsh mallow, two pounds; pulverized hydrastis Canadensis, two ounces; peach kernels, eight ounces; water, one gallon. Boil and strain, then mix the residue with the gin and sugar; then boil all together until a complete syrup is formed: while warm, add sulph. of morphine, in solution, two drachms, and two pounds gum Arabic. This makes one of the very best stimulating expectorants now in use, and may be given in doses of from one drachm to two ounces three times a day. In this combination we have an expectorant, stimulant, anodyne, tonic, and diuretic. We have used this in a very large number of cases in both private and clinical practice. The report of the latter is published in the Journal monthly.

Tar Ointment.

This ointment is much extolled for removing tettery eruptions, and for the cure of scald head. It is prepared by melting equal parts of tar, and mutton suet, and then straining through coarse linen.

Itch Ointment.

Take hog's lard, two ounces; sulphuric acid, two drachms. Mix them in a glass mortar. This ointment is said to be an effectual cure for the itch.

Consumption Pill, No. 1.

Take extract stillingia, thirty grains; glacial phosphoric acid, fifteen grains; ampelopsis quinquefolia, twenty grains; Vallet's ferruginous moss, twenty-five grains. Mix; form three grain pill. Dose, one three times a day.

Consumption Pill, No. 2.

Take chloride of gold, two and a half grains; Vallet's ferruginous mass, one hundred grains; glacial phosphoric acid,

ten grains; sulphate of quinine, twenty grains. Mix; form in three grain pills. Dose, one to five a day.

Consumption Pill, No. 3.

Chloride of gold, five grains; extract cannabis indica, twenty grains; panduratin, ten grains; glacial phosphoric acid, thirty grains; quinine, twenty-five grains; pyrophosphate of iron, thirty grains; extract of low century, two scruples. Mix; form in three grain pills. Take one four or five times a day, in connexion with the compound syrup of hypophosphates.

Consumption Pill, No. 4.

Take glacial phosphoric acid, one drachm; white pine gum one drachm; extract low century, ninety grains; sulphate of quinine and chloride of gold, each fifteen grains; precipitate carbonate of iron, thirty grains. Mix, and form ninety pills. Take from two to four a day.

Rheumatic Liniment, No. 1.

Take gum camphor, one pound; oil of origanum, half pound; oil hemlock, half pound; oil sassafras, two ounces; oil cajeput, two ounces; spirits turpentine, one ounce; African red-pepper, four ounces; alcohol, one gallon. Let stand 14 days. This is a very excellent application externally. J.K.

For Sciatic Rheumatism, No. 1.

Take white pine turpentine, twenty-five grains; extract phytolacca decandra leaves, ten grains; extract macrotya racemosa leaves, eighteen grains; sulphate of quinine, twenty grains; xanthoxylin, ten grains. Mix, form twenty pills. Dose, one every two hours.

Liniment for Rheumatism, No. 1.

Take oil of tar, oil hemlock, oil sassafras, pyroligneous acid, alcohol, of each one ounce. Bathe affected part several times a day.

Baldness.

The following is almost a specific for baldness, giving the hair a smooth, glossy and beautiful appearance.

Take lac sulphur, one ounce; sugar of lead, one half ounce; sulphate of copper, five grains; pure water, one half pint. Mix all together, and filter through thin paper; add to the mixture seven ounces of rose water; essence of bergamot, cinnamon, jessamine and peppermint, each one ounce. Bathe the head twice a day, and give a cold shower-bath once or twice a week. The essences are for the purpose of giving it a perfume, and may be omitted, and pure water added to the same amount.

Fire Extractor.

Take olive oil, two pounds; litharge, one pound; to this dyachilon salve add a little turpentine, opium, origanum, and then linseed oil. Spread, and keep from the air.

Burns and Scalds.

Dr. Hill recommends this liniment to be used on burns and scalds, after the inflammatory stage has passed.

Take spirits camphor, half ounce; tincture opium, half ounce; spirits turpentine, one drachm; tincture red pepper, one drachm; sweet oil, three ounces.

Wash for Syphilitic Chancres, by J. G. Rich.

Take tannin, two grains; sulphate zinc, two grains; rose water, one ounce. Saturate a piece of lint, and apply three or four times a day.

Dr. D. Ecker's Liniment for Burns.

Take tar, one drachm; honey, one drachm; lard, one drachm; verdigris, half drachm. Mix, simmer and stir together thoroughly, apply with a feather. It will prevent inflammation, and heals rapidly.

PHARMACY.

Dr. S. Nimrod Ecker's Origanum Liniment.

Take oil origanum, six ounces; spirits of hartshorn, two ounces; sweet oil, four ounces. Mix, and anoint the affected part, and relief will soon come.

For Epileptic Fits, No. 1.

Extract of smart weed made into pills. Take one every morning.

For Epilepsy, No. 2.

Take extract euphrasia officinalis, two scruples; quinine, one scruple; strychnine, one grain; extract iron wood, one scruple; extract scutellarin, one scruple. Mix, form in four grain pills. Take one five times a day.

For Epileptic Fits, No. 3.

Take pulverized buck horn, one and a half pounds; cider vinegar, one gallon. Simmer down to one half gallon. Let it stand for 34 hours. Dose, a tablespoonful three times a day before eating. Keep it well corked.—DR. R. JOHNSON.

Cure for Epilepsy, No. 4.

The following prescription, aided by diet, bathing, and the necessary evacuants to keep up the tone of the stomach, has cured epilepsy:—

Take black cohosh, hops, valerian, of each two ounces; assafoetida, stramonium seeds, of each one ounce; alcohol, three pints. Let stand 14 days, shaking frequently. Dose, for an adult, half an ounce three times a day.

Cure for Epilepsy, No. 5.

Dr. King reports four cases of epilepsy cured by the use of the following:—

Take black cohosh root, two ounces; blue flag root, two drachms; blood root, seventy-two grains; carbonate of ammonia, four drachms. Mix, and divide into 24 powders. Dose, one three times a day.

Antispasmodic Drops, No. 1.

Take equal parts of the saturated tinctures of red pepper, lobelia, and skunk cabbage root. This is a useful preparation, in cramps, spasms, convulsions, lockjaw, &c. Dose, half teaspoonful as often as required in convulsions and lockjaw; it must be poured into the corners of the mouth, and be repeated as occasion may require; generally the effect is almost instantaneous. J. K.

Antispasmodic Drops, No. 2.

Take oil of cloves, one drachm; oil of cajeput, one drachm; rectified oil of amber, one drachm; oil of anise seed, one drachm; alcohol, four drachms. Mix. Dose, one tablespoonful as often as required. For flatulent colic, cramp or spasm in the stomach, &c.

Eye Wash, No. 1.

Take golden seal, half an ounce; borax, two drachms; sulphate zinc, ten grains; pure water, one pint. Mix, (cold) and let it stand to settle; when clear, decant.

Eye Water, No. 2.

Take strong tincture golden seal and tea, equal parts; a sufficient quantity; strain, and to two pints of this add sulphate of iron, sulphate of zinc, and gunpowder, each two drachms. Dilute when first used.

Eye Wash, No. 3.

Take good green tea, half an ounce; golden seal, two ounces; add to these articles one quart of boiling water. Let it stand in a warm place for an hour, then strain, and add white vitriol, burnt copperas and gunpowder, of each, one drachm. Shake it well in a bottle, and let it settle. It will become nearly clear. Use it by applying to the eyes, both externally and internally, in all cases of inflamed eyes. If the eyes are much inflamed, a cloth wet in cold water should

be applied over the eyes on going to bed. Care should be taken not to get it on any white clothes, as it will stain them black. It will in many, if not all, cases of acute inflammation, cure in a short time. If there is much fever and a furred tongue, with costiveness, give an active cathartic, and the inflammation will subside in a few hours.

For Chronic Rheumatism, No. 1.

Take black cohosh, two ounces; poke root, two ounces; prickly ash bark, two ounces; blood root, half ounce; alcohol, two pints. Let stand 14 days, frequently shaking. Dose, from 30 to 60 drops, three times a day.

Food and Drink for the Sick.

The best drink is pure cold water, which should be allowed, under all ordinary circumstances, in liberal quantities.

Frequently, but little food is demanded in acute diseases. When it is given, it should be in the form of broths, gruel, &c. Beef-tea, prepared as under the head of typhoid fever, is an excellent article, and may be given in all cases of fever where food is required. Bread, water, rice-water, rice, coffee &c., may also be given. Those who have charge of the sick, should carefully avoid urging them to take food against their inclination, as much mischief may be done, by crowding the stomach with food which it is not able to digest.

Vegetable Caustic.

Burn black ash bark or hickory bark, and beech bark, to ashes. Boil down to a salt. Keep from the air.

Pulmonary Syrup, No. 1.

Take seneka snake-root, skunk cabbage, lobelia herb and squills, each one half pound; sanguinaria and liquorice extract, of each four ounces. Make one quart of syrup. Dose, teaspoonful every six hours.

For Cancer, No. 1.

Take black ash, water brake, and red alder. Burn to a crisp, and boil to an extract. Apply to the parts often, after which apply a slippery elm poultice.

For Cancer, No. 2.

Dr. Fell uses this formula for cancer.

Take blood root, half ounce; chloride of zinc, half ounce; water, two ounces. Mix for use. Apply on light leather, followed by elm poultice.

Golden Tincture.

Take balsam of tolu, gum guaiacum, gum hemlock,—the gums to be coarsely pulverized—gum myrrh, of each, two ounces; oil of hemlock, three ounces; oil of wintergreen, two ounces; alcohol, one gallon. Let stand 14 days. Shake frequently. This preparation is stimulating, healing, balsamic, diuretic, tonic, antacid, &c. It has proved highly beneficial as an internal remedy for rheumatism, colic, pains, chills, soreness, lameness, flatulence, sour stomach, languor, depressed spirits, palpitation, water brash, and a variety of painful affections. A tablespoonful added to a gill of sweetened water, and a draught taken every hour or two, will be found beneficial for individuals who are exposed to cold, damp, or wet weather, preventing them from being attacked with colds or rheumatism. Dose, from one teaspoonful to a tablespoonful according to the severity and obstinacy of the case, in a half glass of sweetened water, to be repeated frequently in severe cases, and the dose increased till relief is obtained.

J. K.

Injection for Seat Worms, No. 1.

Take mandrake root, one drachm; rue, two drachms; worm seed, one drachm. Make one gill of decoction, and add two drachms of tincture of assafoetida. Use as an injection twice a day.

Injection, No. 2.

Take a strong decoction of boneset, add common salt, one teaspoonful; tincture of aloes, one ounce. Mix, and use every night on retiring. Use as an injection.

Antiseptic, No. 1.

Take marsh rosemary, two ounces; cinnamon bark, half ounce; brandy or diluted alcohol, one drachm. Dose, one to three teaspoonfuls.

Antiseptic Syrup, No. 1.

Take baptisia tinctoria, (indigo weed,) one ounce; comp-tonia asplenifolia, (sweet fern,) one-half ounce; hydrastis Canadensis, (golden seal,) one ounce; humulus lupulus, (hops,) two ounces; pulverized. Mix; add one quart best whisky, and let it stand twelve hours; then strain, add six quarts of water, boil to one quart, and add three pounds of white sugar, and one ounce of common salt, carbonate of iron, half ounce; phosphate of iron, one ounce. Simmer until a syrup is formed, after which, add the whisky tincture, and bottle for use. Dose, one tablespoonful four or five times a day. This is one of the best antiscrofulous pulmonary tonics and antiseptic syrups known.

Strengthening Plaster, No. 1.

Take burdock, two pounds; willow leaves, two pounds; boil in water; strain, and boil down to a syrup. Boil smart-weed the same quantity, add rosin, three parts; white turpentine, one part; evaporate the water; when dry is ready for use.

Strengthening Plaster, No. 2.

Take sweet oil, soap, red cedar oil, and rosin, equal parts. Mix. Good for pain in the side.

Cough Syrup, No. 1.

Take simple syrup, four ounces; oil of tar, one drachm. Mix. Dose, one teaspoonful every hour.

Consumption Syrup, No. 1.

Take bromide of soda or potassa, ten grains; syrup tolu, three ounces; hydrocyanic acid, sixteen drops. Mix. Dose, a half a teaspoonful three times a day.

Consumption Syrup, No. 2.

Take pulverized dandelion, two ounces; Indian arrow, one ounce; boneset and ptelea trifoliata or swamp dogwood, each one-half ounce; spring water, three pints. Steep one hour, strain, then add white sugar, one pound, and brandy four ounces. Take a teaspoonful three times a day.

Vermifuge, No. 1.

Take castor oil, one ounce; worm seed oil, one drachm; anise oil, one-half drachm; tincture myrrh, one-half drachm; spirits turpentine, ten drops; Croton oil, two drops. Mix. Dose, one teaspoonful every two hours.

Internal Remedy for Ascarides or Seat Worms, No. 1.

Take pulverized aloes, ten grains; santonine, twenty-five grains; triturated podophyllin, twenty grains. Mix, divide into twenty-five powders. Take one every night before going to bed.

Vermifuge, No. 2.

Take oil of worm seed, one drachm; tincture of myrrh, two drachms; castor oil, one ounce. Mix. Dose for a child three years old, one teaspoonful every two hours, until it operates on the bowels.

Another.

Take oil of wormseed and oil of tansy, of each one drachm; castor oil, two ounces. Mix well. Dose, one teaspoonful for a child two or three years old.

Compound Syrup of Sarsaparilla and Stillingia.

Take of sarsaparilla, (*smilax officinalis*,) eight ounces; burdock root, (*lappa major*,) eight ounces; yellow dock root,

(*rumex Britannica*,) eight ounces; stillingia root, (*stillingia sylvatica*,) six ounces; false bitter-sweet, (*celastrus scandens*,) four ounces; dandelion root, (*taraxacum dens leonis*,) three ounces; juniper berries, (*juniperus communis*,) three ounces; prickly-ash berries, (*aralia spinosa*,) one ounce; guaiacum wood, (*guaiacum officinalis*,) two ounces.

Coarsely bruise the above ingredients, and moisten them with alcohol; let them stand two or three days. Then put them in a steam displacement apparatus, and pass through vapour of three pints of strong alcohol. Continue the displacement with the steam of water, till the strength is exhausted; set aside the three pints of tincture which first passes, and evaporate the remaining decoctions to one quart; mix this with the tincture, add three quarts of sugar-house syrup, and when cold, add one and a half ounces of iodide of potassium.

The diuretic properties acting directly upon the kidneys, and at the same time gently determining to the skin, greatly promote the efficacy of this preparation in removing morbid conditions of the system, and restoring to health! Not only is the blood, and through it the whole economy gradually rendered healthy, but this process is facilitated by the eliminative qualities of the compound, which cause a constant excretion of abnormal and effete matters through the skin or kidneys according to the temperature surrounding the body, thus hastening the cure. Dose, one tablespoonful three times a day.

Chloro-percha.

Dissolve one ounce of gutta percha in four ounces of chloroform. Useful in all cases where collodion is used.

Compound Syrup of Helianthus.

Take five pounds of the helianthus seed, (sunflower) finely pulverized, to which add a sufficient quantity of water to macerate well; let this stand five days, then use a displacer, having

the mass boiling hot; to this, after being strained, add three gallons Holland gin, the very best; then add twenty-four pounds of loaf sugar; take of marsh mallow, two pounds; pulverized hydrastis Canadensis, two ounces; peach kernels, eight ounces; water, one gallon; boil and strain, then mix the residue with the gin and sugar; then boil altogether until a complete syrup is formed; while warm add sulph. morphine, in solution, two drachms, and two pounds of gum Arabic. This makes one of the very best stimulating expectorants now in use, and may be given in doses of from one drachm to two ounces, three times a day. In this combination we have an expectorant, stimulant, tonic, anodyne, and diuretic. We have used this in a very large number of cases, in both private and clinical practice. The report of the latter is published in the Journal, monthly.—*E. & E. M. Journal.*

Syrup of Hypophosphite of Lime.

Take of hypophosphite of lime, an ounce; water, nine and a half fluid ounces; white sugar, twelve ounces; fluid extract of vanilla, half a fluid ounce. Dissolve the salts in the water, filter, add the sugar, dissolve by aid of heat, and add the vanilla. The dose is from a teaspoonful, ($3\frac{1}{2}$ grs.,) to a tablespoonful, (14,) according to the circumstances of the case, three times a day.

Compound Syrup of Hypophosphite.

The following formula has been made in view of the double purpose to which these salts are directed by Dr. Churchill, the increase of nerve force, and the elevation of the tone of the several functions concerned in alimentation and nutrition; and will afford an agreeable means of testing practically their merit. The iron salt is presented in a form well adapted for entering the circulation, whilst the acid, besides exerting its solvent power, adds to the agreeable taste of the preparation.

Take of hypophosphite of lime, two hundred and fifty-six grains; hypophosphite of soda, two hundred and ninety-two grains; hypophosphite of potassa, one hundred and twenty-eight grains; hypophosphite of iron,* (recently precipitated,) ninety-six grains; hypophosphorous acid solution, q. s., or two hundred and forty grains; white sugar, twelve ounces; extract of vanilla, half ounce; water, a sufficient quantity.

Dissolve the salts of lime, soda and potassa, in six ounces of water; put the iron salt in a mortar, and gradually add solution of hypophosphorous acid till it is dissolved; to this add the solution of the other salts, after it has been rendered slightly acidulous with the same acid, and then water, till the whole measures nine fluid ounces. Dissolve in this the sugar, with heat, and flavour the vanilla. Without flavouring, this syrup is not unpleasant, being slightly saline, and not at all ferruginous. Any other flavouring may be used, as orange peel, orange flower, or ginger. It is also suggested to physicians that glycerine may be used, wholly or partially, in sugar when indicated, six ounces and a half of glycerine being substituted for twelve ounces of sugar. The object of acidulating the saline solution, is to decompose any alkaline carbonate which may be present, and which have been noticed by the writer in some of the commercial soda salt. The dose of this preparation is a teaspoonful three or four times a day. A teaspoonful contains two grains of the lime salt, one and a half of the soda salt, one of the potassa salt, and three-quarters of a grain of the iron salt, besides a little hypophosphorous acid.

* This quantity, ninety-six grains of hypophosphite of iron, is obtained when one hundred and twenty-eight grains of hypophosphite of soda dissolved in two ounces of water is decomposed with a slight excess of solution of persulphate of iron; and the white precipitate will wash on a filter with water.

Table of Proportionate Dose for Different Ages.

Under $\frac{1}{2}$ year,	one-fifteenth of a full dose,	or	4 grains.
" 1 "	one-twelfth	"	5 "
" 2 "	one-eighth	"	$7\frac{1}{2}$ "
" 3 "	one-sixth	"	10 "
" 4 "	one-fifth	"	12 "
" 7 "	one-third	"	20 "
" 14 "	one-half	"	30 "
" 20 "	two-thirds	"	40 "
" 21 "	the full dose	"	1 dr.
" 63 "	eleven-twelfths	"	55 gr.
" 77 "	five-sixths	"	50 "
" 100 "	two-thirds	"	40 "

To the above rule there are certain exceptions; thus castor oil requires to be given in larger proportionate doses, while opium, and the narcotics generally, should be administered in smaller proportionate doses.

Sex, temperament and idiosyncrasy, have also a modifying effect upon the dose, and they should always be kept in view in the administration of medicines.

Females usually require smaller doses than males; and persons of a sanguine temperament bear depletory medicines better than the phlegmatic.

Weights and Measures.

In America, in buying and selling medicine, the avoirdupois weight is used, but in compounding medicines, druggists use the apothecaries' weight. This is divided into grains, scruples, drachms, ounces, and pounds:—twenty grains make one scruple, three scruples one drachm, eight drachms one ounce, twelve ounces one pound. For measuring fluid medicines, a small glass is used, called the graduated measure—the size of which varies from one drachm to one ounce. When fluid medicines are to be measured accurately, the graduated measure should always be used.

GLOSSARY OF MEDICAL TERMS EMPLOYED IN THIS WORK.

Abdomen. The cavity situated between the lower part of the thorax and the region of the pelvis, containing the intestines, &c.

Abnormal. Unhealthy.

Abortion. Miscarriage.

Abrasion. Excoriation.

Abscess. Cavity containing pus.

Absorbents. The lacteals and lymphatic vessels.

Absorption. The act of taking or sucking up.

Acacia. Gum Arabic.

Acarus Scabiei. The itch insect.

Acetate. A salt containing acetic acid, united to a base.

Acetic Acid. Vinegar.

Acetic Tincture. A tincture made with vinegar.

Acid. A compound body which neutralizes alkalies and other bases.

Aconite, Monk's-hood. A native of Europe. This plant is cultivated in gardens as an ornament. It is very extensively used by Eclectics as a febrifuge.

Aconitum Napellus.

Acme. The height of a disease.

Acne. Small red pimples appearing upon the face, mostly of young persons.

Adhesive Inflammation. That kind of inflammation which glues parts together, by means of coagulable lymph.

Adipose. Fatty.

Ether. The name of the oxyde of Ethyle.

Afferent. Name of lymphatics conveying lymph to the glands; also, nerves which convey impressions to the brain.

Afflux. The act of flowing to.

Ague-Chill. The cold stage of an intermittent.

Albumen. A substance found in animals and vegetables, and which constitutes the chief part of the white of eggs.

Alcohol. The rectified spirits of wine.

Aletris Farinosa. Star-grass.

Aliment. Any kind of food.

Alimentary Canal. The entire passage through which the food passes from the mouth to the anus.

Alkali. A substance, having a metallic base, which neutralizes acids, as potash, soda, and ammonia.

Allopathy. The system of curing one disease, by substituting another.

Aloes. The inspissated juice of the aloe spicata.

Alnuin. Concentrated remedy from the swamp alder.

Alteratives. Medicines intended to change the morbid action by restoring the healthy functions of the secretions, &c., by a gradual process.

Alum. Super sulphate of alumina and potash.

Alvine. Relating to the intestines.

Amaurosis. A paralysis of the optic nerve.

Ammonia. Volatile alkali.

Amphoric. A sound, like blowing into a decanter, heard in auscultating the chest in certain diseases.

Amenorrhœa. Absence of the menses.

Ampelopsin. A concentrated remedy from the woodbine.

Anæmia. An impoverished state of the blood.

Analysis. Resolution of a compound body into its elements.

Anasarca. Dropsy of the cellular tissue, or membrane, beneath the skin.

Aneurism. Morbid enlargement of an artery.

Angina. Generic name of morbid affections of the throat.

Anorexia. Want of appetite.

Anthelmintic. A worm-medicine.

Antidote. A medicine given to destroy a morbid cause.

Antimony. A metal used in medicine.

Antiperiodic. A remedy for periodic diseases, as ague.

Antiphlogistic. A remedy for inflammation.

Antiseptic. A preservative from putrefaction.

Anus. The inferior opening of the rectum.

Aorta. The large artery passing off from the heart.

Aperient. A gentle purgative.

Aphonia. Loss of voice.

Apthus. Sore patches on the mucous membrane.

Apocynin. A concentrated remedy prepared from the bitter root.

Apoplexy. Hemorrhage into the brain.

Ap pyrexia. Intermission, or absence of fever.

Arachnoid. Web-like membrane covering the brain.

Areolæ. The interstices between fibres composing organs.

Arnica Montana. Leopards' bane; a remedy used in intermittent fever, &c., and for mechanical injuries.

Artery. The name of a blood vessel which conveys blood from the heart.

Arthritis. Gout.

Assafoetida. The inspissated juice of a plant growing on the shores of the Mediterranean.

Ascarides. Small worms infesting the rectum.

Ascites. Dropsical effusion within the abdomen.

Asclepin. Concentrated remedy obtained from the pleurisy root.

Asphyxia. Apparent death from suffocation.

Asthenic. Applied to disease of a low grade of action.

Asthma. A disease of the lungs, accompanied by difficult breathing.

Astringents. Medicines used to contract the animal fibre.

Atony. A want of tone or energy in the muscular power.

Atrophy. A morbid state of the digestive system, in which the food taken into the stomach fails to afford sufficient nourishment. A wasting of the whole or different organs of the body.

Auricles. The superior cavities of the heart.

Aurium, Tinnitus Ringing in the ears.

Auscultation. Method of detecting disease by listening to the abnormal sounds produced in the lungs, in inspiration and expiration, by direct application of the ear, or by means of a hollow tube applied to the chest, called a stethoscope.

Axilla. The arm-pit.

BALMONEY. *Chelona Glabra*, Snake's-head, Bitter Herb. Extensively used as a stomachic and tonic.

Balsam Copaiva. Liquid resin used for chronic inflammation of the mucous membrane.

Balsam of Tolu. Liquid resin used for coughs and catarrhal affections.

Baptisin. A concentrated remedy, prepared from the wild indigo or *Baptisia Tinctoria*.

Battery, Galvanic. A connected series of zinc and copper plates, alternately arranged, with acid and water.

Bayberry. An astringent plant used as a tonic and astringent.

Beeberine. Active principle of the bark of the Beeberu.

Belladonna. Deadly Night Shade.

Bellows sound. A sound produced in the lungs and heart, analogous to a bellows.

Berberin. Active principle of the barberry; antiperiodic, tonic and laxative.

Benzoic Acid. Flowers of Benzoin.

Bicuspides. The first grinding teeth, molars.

Bifurcate. To divide into two branches.

Bile. A yellowish fluid secreted by the liver; its use is to remove from the fluids superfluous hydro-carbons.

Bistoury. Small knife used by surgeons.

Bitartrate of Potassa. Cream of tartar.

Bleb. Small blister.

Borax. Salt of boracic acid and soda, sub-borate of soda.

Bronchi. The tubes into which the trachea or windpipe divides.

Bougie. Small elastic rod for dilating strictures of the urethra; also for evacuating the bladder.

Bronchitis. Inflammation of the ramifications of the wind-pipe.

Bronchial Sound. Sounds heard over the bronchi.

Bronchophony. Resonance of the voice heard over the bronchial tubes, or conveyed through a consolidated lung, or through an accumulation of fluid.

Bronchocele. Enlargement of the thyroid gland.

Bryonia. Medicine used in typhoid fever.

Bubo. Inflamed gland occurring in the groin or axilla.

CADAVEROUS. Countenance resembling a corpse.

Cæcum. The head of the colon; so-called from being perforated at one end only.

Cajeput. Volatile oil used for rheumatism, &c.

Calculus. Stone in the bladder.

Calomel. Combination of chlorine and mercury; a proto-chloride.

Camphor. A valuable antispasmodic and nervine.

Cannabis Indica. Indian hemp.

Canula. A hollow tube.

Cantharides. Spanish flies, for blistering; used extensively by allopaths and homœopaths.

Capillaries. Hair-like vessels for conveying the blood from the arteries to the veins.

Capsicum. Red pepper, Cayenne; pure stimulant, used in two or three grain doses, whenever a stimulant is indicated.

Carbo-ligni. Charcoal; carbo-vegetabilis.

Carbonates. Combinations of carbonic acid, with a base.

Cardiac. Appertaining to the heart.

- Cardialgia. Pain in the stomach.
- Carditis. Inflammation of the heart.
- Caries. Disease of the bone.
- Cartilage. Gristle.
- Carotid. Name of the artery passing up each side of the neck, conveying the blood to the brain.
- Castor. A secretion found in a sac near the anus of the beaver.
- Catalepsy. A nervous affection, involving loss of consciousness.
- Catamenia. The menstrual flux.
- Cataplasm. A poultice.
- Catarrh. Flow of mucus.
- Catharsis. Purging.
- Cataract. Opacity of the crystalline lens.
- Catheter. A hollow silver tube used for evacuating the bladder.
- Caulophyllin. The active principle of the blue cohosh.
- Caustic. A substance which destroys parts by combining chemically, or disorganizing them.
- Ceanothus. New Jersey tea.
- Cellular Tissue. The fine or net-like tissue connecting most of the structures of the human body.
- Cephalitis. Inflammation of the brain.
- Cephalome. A morbid tumor, the matter of which resembles the brain.
- Cerate. An ointment made of wax.
- Cerasin. Active principle of the choke-cherry; used very extensively as an antiperiodic and febrifuge; the medium dose from three to five grains, repeated every two or three hours until thirty or forty grains are given.
- Cerebellum. The posterior portion of the brain.
- Cerebrum. The anterior portion of the brain.
- Cerebritis. Inflammation of the brain.
- Cervex Uteri. Neck of the womb.
- Chalybeate. Containing iron.
- Chancre. Syphilitic ulcer.
- Chelona Glabra. Snake's head, balmony. It is tonic and vermifuge, used in the form of infusion.
- Chelonin. The active principle of the chelona glabra.
- Chlorine. An elementary gas.
- Chlorosis. Green sickness.
- Cholerine. A modified species of cholera.
- Cholera Morbus. Bilious vomiting and purging.

Cholera Infantum. Summer complaint of children.

Chorea. St. Vitus' dance.

Chyme. The pulp formed by the food mixing with the gastric secretions, after it has been for some time in the stomach. After the chyme becomes mixed with the pancreatic and biliary secretions of the duodenum, it is converted into chyle.

Cicatrix. A scar.

Cicatrization. Process of healing.

Cicuta. Poison hemlock.

Cicutin. The alkaloid of cicuta.

Cimicifugin. The concentrated principle of the black snake-root.

Cinchona. Peruvian Bark.

Cinchonine. An alkaloid of the cinchona. It is antiperiodic, and used in the same cases as quinine.

Citric acid. Acid of lemons.

Clinic. A school in which medicine is taught by examining diseased patients at the bedside.

Clysters. Injections per ano and per vagina.

Cnicene. One of the active principles of the blessed thistle.

Coagulum. A clot of blood or milk.

Coffea, Coffee. A homœopathic remedy for nervous diseases.

Colchicin. The alkaloid of colchicum autumnale.

Cold. Catarrh in the head.

Colic. Gripping in the intestines.

Colitis. Inflammation of the mucous membrane of the colon.

Collapse. Recession of blood from the superficial capillaries, and failing of the vital powers.

Colliquative. Excessive evacuation.

Colombin. Proximate principle of columbo.

Colon. The large intestine.

Coma. Drowsiness, lethargy.

Comatose. Drowsy.

Compatibles. Medicines which can be used together without impairing their properties.

Confluent. Running together; one variety of small-pox.

Congenital. Being present at birth.

Congestion. Over fulness of the blood-vessels.

Congestive Diseases. Those in which congestion is the most prominent symptom.

Congestive Fever, is a fever, where the stomach, liver and spleen, are the congested organs.

Conjunctiva. The outer membrane of the eye.

Conjunctivitis. Inflammation of the conjunctiva.

Constipation. Costiveness.

Constitutional. Hereditary, or acquired predisposition; a disease is said to be constitutional when it affects the whole system.

Consumption. Wasting away.

Contagion. Propagation of disease by contact.

Continuity. Direct connection; identity of surface.

Cornea. The horny transparent coat of the eye.

Corneitis. Inflammation of the cornea.

Cornus Florida. Dog-wood.

Cornine is the active principle of the cornus Florida, and is used as a substitute for quinine.

Corrugated. Wrinkled.

Corydalin. The active principle of the Turkey pea; it is a specific remedy for syphilis.

Critical. Applied to certain symptoms, and certain stages of disease indicating crisis.

Croup. Inflammation of the trachea.

Cutis Anserinus. Goose-skin.

Cynanche. Any inflammatory disease of the throat.

Cypripedin. The active principle of the lady-slipper.

Cystitis. Inflammation of the bladder.

Decoction. Preparation made by steeping.

Decomposition. Dissolution of the animal tissue.

Decubitus. Lying down.

Deglutition. The act of swallowing.

Delirium. Aberration of the mind.

Delirium Tremens. Disease produced by excessive use of intoxicating liquors.

Dementia. Loss of mind; idiocy.

Dental. Appertaining to the teeth.

Dentition. Process of cutting the teeth.

Depletion. Diminishing the fulness of a part, by evacuating remedies.

Derangement. Applied to functional disturbances of the organs.

Dermoid. Resembling the skin

Desiccation. Drying, scabbing.

Desquamation. Scaling off.

Determination. Unnatural flow of blood to the part.

Diabetes. Disease characterized by mal-assimilation and saccharine urine.

Diagnosis. Distinction of maladies.

Diagnostic. Characteristic of disease.

Diaphorous. Transparent.

Diaphoresis. A gentle perspiration.

Diaphoretic. Medicines having a tendency to excite perspiration.

Diaphragm. The partition separating the thorax from the abdomen.

Diarrhœa. Looseness of the bowels.

Diastole. A periodical dilatation of the heart and arteries, when the blood enters their cavities. It is the opposite movement to cystole, in which the heart and arteries contract to send forth the blood.

Diathesis. Constitutional tendency.

Digestion. Conversion of food into blood.

Digitalis. Fox-glove.

Digitalin. A concentrated preparation from the digitalis; it is diuretic and sedative; from one-fifth to one-half grain is a dose.

Dilatation. Widening.

Dioscorea Villosa. Yam-root.

Dioscorine. The active principle of the yam-root; a specific for bilious colic.

Discutient. A repelling medicine.

Disorganization. Destruction of an organ.

Dissection. The anatomical examination of the parts of the body.

Diuresis. An increased flow of urine.

Diuretic. Medicine which increases the secretion of the urine.

Dorsal. Pertaining to the back.

Drachm or dram, ʒ. Sixty grains by weight, and an ordinary teaspoonful by measure.

Drastic. Powerful purge.

Dropsy. Effusion of serum into any of the cavities.

Drug. A medicine which has not undergone a preparation.

Duct. A canal for conveying fluids.

Dulcamara. Bitter-sweet.

Dura-mater. The outer membrane of the brain.

Dysentery. Inflammation of the colon.

Dysmenorrhœa. Painful menstruation.

Dyspnœa. Difficulty of respiration, shortness of breath.

Dysuria. Difficulty in passing urine.

ECCHYMOsis. Effusion of blood beneath the skin.

Eclectic Physicians. Those who select their remedies from all the systems of practice.

American Eclectic Physicians. This refers to a large class of physicians, who believe that the investigation and practice of medicine shall be free. That all remedies should be applied that can be of any utility in removing disease, no matter from what system they may be derived. They also claim that the science of medicine is progressive, and that no dogmatic creed should be adopted to impede its progress. By the Eclectic profession, the valuable remedies of the other systems have not only been adopted, but a large number of new ones are introduced, which enable them to combat disease with far greater success than by any exclusive system.

Eczema. Eruption on the skin.

Efferent. To carry. Efferents may be the lymphatics, blood-vessels, or nerves.

Effusion. Pouring out of blood, or any other fluid, into the areolar membrane or cavities of the body.

Effete. Worn out.

Egophony. A sound heard when the lung is hepatized, or the pleural sac partly filled with fluid; when the voice strikes the ear it yields a tremulous or goat-sound.

Elaterin. The active principle of the wild cucumber; a drastive purgative.

Electricity. Galvanism, electro-magnetism, and animal magnetism, are used for rheumatism, amaurosis, paralysis, and most nervous diseases.

Element. A simple constituent or principle of the body, or any other substance.

Emaciation. Wasting away.

Emesis. Vomiting.

Emetics. Medicines provoking vomiting.

Emetine. The alkaloid and emetic principle of ipecac; it is used as an emetic in one-grain doses.

Emeto-Cathartic. A medicine that produces vomiting and purging.

Emmenagogues. Medicines believed to have the power of exciting the menses.

Emollients. Medicines tending to soften parts that are tense and inflamed.

- Empyema.** Collection of pus in the pleural cavity.
- Emphysema.** Cavity filled with air; or the air may pervade the cellular tissue; it is divided into traumatic and idiopathic.
- Enamel.** The outer surface of the tooth.
- Encysted.** Covered with a sac.
- Endemic.** A disease prevailing in a certain district; not epidemic.
- Endosmosis.** The passage of liquids or gases through membranes.
- Endocarditis.** Inflammation of the internal membrane of the heart.
- Endocardium.** The membrane that lines the interior of the heart.
- Enema.** Injection into the rectum.
- Engorgement.** Accumulation of blood in its vessels.
- Enteric.** Belonging to the intestines.
- Enteritis.** Inflammation of the small intestines.
- Epidemic.** A disease prevailing over an extensive country or district.
- Epidermis.** The scarf-skin; cuticle.
- Epigastric.** Above the stomach.
- Epigastrium.** The region above the stomach.
- Epilepsy.** Falling-sickness; fits.
- Epistaxis.** Bleeding at the nose.
- Ergot.** Spurred rye.
- Erysipelas.** Inflammation of the skin.
- Erythema.** Simple redness.
- Euonymine.** The active principle of the *Euonymus Atropurpureus*; a valuable alterative, acting with great efficiency upon the liver.
- Eupurpurin.** The active principle of the Queen of the Meadow; a valuable remedy for gravel and uterine diseases.
- Eupatorin (perfo).** Active principle of the *Eupatorium Perfoliatum*, or boneset; a valuable tonic and antiperiodic.
- Euphorbin.** The active principle of Bowman's root; used as an emetic, cathartic, and diaphoretic.
- Eustachian.** A tube, leading from the throat to the internal ear.
- Exacerbation.** Aggravation of fever, or other disease.
- Excretion.** Anything thrown off.
- Exfoliation.** A separation of dead from living bone.
- Exhalants.** Vessels which throw out.
- Exosmosis** is the passing of rarer fluids to the denser, through the membranes.

Exostosis. Morbid enlargement of the bone.

Exotic. Belonging to a foreign country.

Expectorant. Medicine causing a discharge of mucus from the bronchi.

Extravasation. The effusion of blood into cavities, or beneath the skin.

FASCIAE. Tendonous expansions, covering certain muscles, &c.

Fauces. The pharynx; back part of the mouth.

Favus. A pustule resembling the honey-comb.

Febrifuge. Medicine to subdue fever.

Febrile. Belonging to fever.

Fel Bovum. Ox-gall; specific for quinsy.

Felon. A deep abscess upon the finger.

Fever. Disease characterized by three stages—cold, hot, and sweating stage.

Fistula. Deep-seated ulcer, with a tube or canal opening externally.

Flaccid. Soft, pliable, relaxed.

Flatulence. Collection of gas in the stomach and bowels.

Fluctuation. Sensation produced by percussion, when the cavity contains pus.

Follicles. Folds; as the follicles of the mucous membrane.

Formula. Prescription for preparing medicines.

Fremitus. A vibration felt by laying the hands upon the chest.

Function. The action by which vital phenomena are produced.

Functional Diseases. Those diseases in which there is supposed to be only derangement of action.

GALBANUM. A genus of plants, the gum of which forms a valuable warming plaster for diseases of the spine.

Gall-Bladder. A small sac connected with the liver, being the reservoir for the bile.

Gangrene. Partial death of a part.

Gastric. Belonging to the stomach.

Gastritis. Inflammation of the stomach.

Gaultheria. The box-berry; wintergreen. The oil is used as a diuretic and stimulant.

Gland. Applied to those organs which separate from the blood any fluid whatever.

Globule. A small globe. The blood is composed of globules, the red, white and grey.

Glossitis. Inflammation of the tongue.

Glottis. A small oblong body in the larynx.

Glycyrrhiza. Liquorice.

Gonorrhœa. Flux from inflammation of the urethra.

Gossypium Herbaceum. Cotton plant; the fluid extract is extensively used as an emmenagogue.

Gout. Inflammation of the fibrous and ligamentous parts of the joints.

Gravel. Small stones in the bladder.

HÆMATEMESIS. Vomiting of blood.

Hæmaturia. Hemorrhage from the bladder.

Hæmoptysis. Hemorrhage from the lungs.

Hemorrhage. Bleeding.

Hemorrhoidal. Relating to hemorrhoids.

Hemorrhoids. Piles.

Heart. Centre of circulation.

Hectic. A low form of an exhausting fever, characterized by intermissions and remissions, and is mostly dependent upon some organic affection, as consumption.

Hemiplegia. Paralysis of one side of the body.

Helonin. The active principle of the star-grass.

Hepatic. Pertaining to the liver.

Hepatization. Conversion of tissue into substance like liver.

Hernia. Protrusion of the intestine.

Herpes. One kind of tetter.

Histogenic. Producing organic textures.

Homœopathy. Hahneman's doctrine of curing disordered actions in the human body, by inducing disordered action of the same kind, but more easily controlled. (See Homœopathy).

Hospital. An institution for the reception and treatment of the sick and injured.

Humors. All the fluids of the body except the blood.

Hydatids. A species of encysted Entozoa.

Hydrogogues. Medicines producing watery evacuations.

Hydrastin. Active principle of Golden seal.

Hydrocephalus. Dropsy of the brain.

Hydropathy. Presnitz's method of curing disease by the external and internal use of water. (See Hydropathy).

- Hygiene. The science of preserving health.
- Hyosciamin. Active principle of the hen-bane.
- Hypogastrium. The lower part of the abdomen, below the umbilicus, and above the pubic region.
- Hysteria. A nervous disease peculiar to females.
- ICTERUS. Jaundice.
- Idiopathic. Primary or original disease; one not dependent upon others.
- Idiosyncrasy. An individual peculiarity of constitution.
- Ignatia Amara. Plant bearing St. Ignatius' bean.
- Ileum. The longest portion of the small intestines; also one of the bones of the pelvis.
- Imperforate. The congenital closure of any foramen.
- Impetigo. Moist tetter.
- Imponderables. Without weight, as light, electricity, heat, &c.
- Incision. A clean cut by a sharp instrument.
- Incisors. The front teeth.
- Incompatibles. Medicines that cannot be used together without impairing their properties.
- Incontinence. The inability to retain the natural evacuations.
- Incubus. Nightmare.
- Indication. That which demonstrates what ought to be done.
- Indigenous. That which is peculiar to a country.
- Indigestion. Dyspepsia.
- Indolent Ulcers. Those which do not incline to heal.
- Induration. Hardness of a tissue.
- Infectious. Communicable.
- Infiltration. Extravasation of blood or other fluids into the soft tissues.
- Infinitesimal. Inconceivably minute. (See Homœopathy).
- Inflammation. A state in which the capillaries of the affected parts are interrupted in their proper function, are morbidly relaxed and over distended, and in which the blood which is passing through them is first abnormally excited and chemically changed, and then stagnates and coagulates. (Calvin Newton).
- Inflammatory. That which relates to inflammation.
- Influenza. Epidemic catarrh or cold.
- Infusion. Watery decoction.
- Ingestia. Food or drink.

Inhalation. The act of inspiration; also the method of curing disease by inhaling vapors.

Injection. Clyster; enema.

Inneculation. The insertion of morbid matter into any part of the system.

Inorganic. Not organized.

Insane. An unsound mind or intellect.

Insanity. A deviation from the natural manifestations of mind.

Inspiration. The act of receiving air into the lungs.

Integument. That which covers anything; as the skin, &c.

Intermission. The intervening time between the paroxysms of periodical diseases.

Intermittent Fever. (See Fever and Ague.)

Invagination. A portion of the intestines, falling into one another, becoming strangulated.

Iodine. Elementary body obtained from sea-weed.

Iodide of Potassium. Compound of iodine and potassium.

Irisin. The active principle of blue-flag.

Iritis. Inflammation of the pupil of the eye.

Irritability. A contractility of the solids, when stimulants are applied.

Irritation. The effect of stimulants.

JALAP. A purgative root.

Jalapin. The active principle of the jalap.

Jaundice. A disease accompanied with yellowness.

Juglandin. The active principle of the butternut.

KINGS'-EVIL. Scrofula.

Kinesopathy. Method of curing disease by rubbing.

Kaino Miasmata. Malaria; exhalation from putrifying substances.

LABIA. Lip.

Lactine. Sugar of milk.

Languor. Debility.

Laryngeal. Belonging to the larynx.

Laryngitis. Inflammation of the larynx.

Larynx. The upper part of the windpipe.

Laxative. A mild purgative.

Leech. An aquatic worm.

- Leptandrin. A valuable alterative obtained from the black-root.
- Lethargy. Continued sleep or stupor; coma.
- Leucorrhœa. Sexual weakness, peculiar to females.
- Litmus Paper. Used for detecting acids and alkalies.
- Lobelia-Inflata. Indian tobacco.
- Lobelin. The active principle of lobelia, which is extensively used as a medicine.
- Lumbago. Rheumatic affection of the back.
- Lumbrici. Round worm of the intestines.
- Lupulin. One of the active principles of the hop; used in ague and nervous diseases.
- Lymph. A thin, transparent fluid, which circulates in the lymphatics.
- Lymphatics. Vessels carrying lymph.

MACERATION. Softening in water.

Magnesia, Sulphas. Epsom Salts.

Magnesia. One of the earths, having a metallic basis.

Malaria. Supposed to be a noxious gas, arising from decomposition of vegetable matter.

Malformation. Defective, irregular.

Marshmallow. A valuable mucilaginous diuretic.

Matico. A styptic plant; native of Mexico.

Measles. An eruptive fever.

Meatus. A passage.

Melæna. Discharge of dark blood from the bowels.

Melancholy. Species of deranged mental action.

Melanosis. Black deposits of a tuberculous character.

Meningitis. Inflammation of the membranes of the brain.

Meningial. Relating to the membranes of the brain.

Menorrhagia. Excessive menstruation.

Menstruation. The catamenia.

Mercurial. Pertaining to mercury.

Mercury. Quicksilver. Hydrargyrum.

Mesmerism. Somnambulism; first produced by Mesmer.

Metamorphosis. Transformation.

Metastasis. Change in the seat of the disease.

Metritis. Inflammation of the womb.

Miasm. Poisonous emanation from decomposing vegetable and animal substances.

Miliary Fever. Name given to eruptive fever in children.

- Mollities Ossium. Softening of the bones.
Morbific. Causing diseases.
Morbus Coxarius. Hip-disease.
Mortification. Death of a part.
Mucilage. A watery solution of gum.
Mucus. Animal Mucilage.
Murmurs, Respiratory. Are the sounds produced by the air passing in and out of the lungs.
Myricin. The alkaloid of the bayberry.
- NARCOTIC. Remedy producing sleep or stupor.
Nausea. Sickness at the stomach.
Necrosis. Death of a bone.
Nerves. Small cords conveying sensation to different parts of the system.
Nervine. Medicine allaying nervous excitement.
Neuralgia. Pain in the nerves.
Nitre. Saltpetre.
Nitro-muriatic Acid. Used as a styptic.
Nutrition. Increase, growth.
Nymphæa Odorata. White pond lily.
- OCCULT. Hidden, latent.
Oedema. Effusion into the cellular membrane.
Oesophagus. Passage leading from the back part of the mouth to the stomach.
Olfactory. Relating to the sense of smell.
Ophthalmia. Inflammation of the eyes.
Opium. The concrete juice of the poppy.
Optic. Relating to the eye.
Organs. Parts performing a definite function.
Organic Diseases. In Pathology, diseases in which there is derangement or alteration of structure, are termed organic.
Orthopnoea. Difficult respiration, requiring the erect posture.
Os. A bone.
Osseous. Bony.
Ostitis. Inflammation of the bone.
Otitis. Inflammation of the ear.
Otorrhœa. A purulent discharge from the ear.
Ovaries. Two small oval bodies attached to the uterus, one on each side.

Ovum. An egg.

Oxygen. One of the most extensively diffused elements in nature.

Ozæna. A fetid ulcer in the nose.

PAINTERS' COLIC. A dangerous kind of colic, ascribed to absorption of lead.

Palate. The roof of the mouth.

Palpation. The method of examining the chest by application of the hand.

Palpitation. An increased and irregular action of the heart.

Panacea. A remedy used for all diseases.

Pancreas. The gland situated behind the stomach.

Pancreatic Juice. The secretions of the pancreas.

Paralysis. Loss of motion.

Paraplegia. Paralysis of the lower half of the body.

Parenchyma. The cellular tissue; the principal part of an organ.

Pathognomonic. Characteristics of disease.

Pathological. Morbid changes.

Pathology. Doctrine of disease.

Pediluvian. Foot-bath.

Pemphigus. Eruptive disease, characterized by small blisters.

Periostitis. Inflammation of the periosteum.

Peritoneum. Serous membrane lining the abdomen.

Pertussis. Hooping-cough.

Pharmacy. The art of preparing and combining medicines.

Pharyngitis. Inflammation of the pharynx.

Pharynx. Back part of the mouth.

Phlebitis. Inflammation of the veins.

Phlogistic. Inflammatory.

Phrenitis. Inflammation of the brain.

Phthisis. Consumption.

Physiology. Science of life.

Phytolaccin. A concentrated remedy prepared from the poke-root, a valuable alterative.

Piles. Varicose veins appearing about the anus.

Piperin. A concentrated remedy prepared from the black pepper.

Plethora. Over-distension of the blood-vessels.

Pleura. A serous membrane lining the chest.

Pleuritis. Inflammation of the pleura.

Pneumonia. Inflammation of the lungs.

Podophyllin. A concentrated remedy prepared from the mandrake.

Poison. That substance which, when taken into the system, produces disease, rapidly tending to dissolution.

Polypus. A tumor growing in the cavities of the body.

Populin. Concentrated remedy prepared from the poplar.

Precordia. The fore part of the thorax.

Probang. An instrument used to apply caustics to the throat.

Prunin. Concentrated remedy prepared from the wild cherry.

Pulmonary. Belonging to the lungs.

Pulsatilla. The anemone pratense.

Pulse. Beating of the heart and arteries.

Purgatives. Medicines which increase the peristaltic motions of the bowels.

Purpura. Scurvy.

Purulent. Resembling pus.

Pus. Matter produced by suppuration.

QUACK; Quacksalber. An ignorant physician.

Quack Medicines. Secret remedies administered by quacks.

Quassia. A bitter wood; used as a tonic.

Quicksilver. Mercury.

Quinine. Alkaloid of Peruvian bark.

Quinsy. Inflammation of the tonsils.

RASH. Patches of redness on the skin.

Regurgitation. Return of blood, as from the ventricle of the heart to the auricle.

Regimen. Regulation of diet, so as to promote health.

Remission. Time between paroxysms of ague.

Resonance. A revibration of sound.

Respiration. Breathing.

Rheum Palmatum. Rhubarb.

Rheumatism. Inflammation of the membranes of the joints.

Roseola. Rose-rash.

Rubeola. Measles.

SALICIN. Concentrated remedy, prepared from the willow.

Sanguinarin. Concentrated remedy, prepared from Bloodroot.

Santonine. A crystalline body, obtained from worm seed.

Scarlatina. Eruptive fever.

- Schirrous. Hard.
- Scorbutus. Scurvy.
- Scrofula. A chronic disease of the lymphatic system.
- Scutellarin. Concentrated remedy, prepared from the skull-cap.
- Sedative. A remedy that lessens arterial and nervous excitement.
- Senecin. Concentrated remedy, prepared from the *Senecio gracilis*.
- Serous. Watery.
- Sialagogue. Medicines that increase the flow of saliva.
- Sibilant. A hissing sound heard in disease of the lungs.
- Sinapism. Mustard-poultice.
- Solidist. One who ascribes all diseases to the solids.
- Somnambulism. Sleep-walking.
- Spasm. Morbid contraction of the muscles, cramp, &c.
- Specific. A remedy competent to remove the disease.
- Spermatorrhœa. A seminal weakness.
- Spleen. An organ found on the left of the stomach.
- Stethoscope. An instrument employed for examining diseases of the chest.
- Stillingia Sylvatica. Queen's root.
- Stomacace. Canker of the mouth.
- Stomatitis. Inflammation of the mouth.
- Strangury. Painful discharge of the urine.
- Strumous. Scrofulous.
- Sudorific. Producing perspiration.
- Suppuration. Formation of pus.
- Syncope. Fainting.
- Syphilis. Venereal disease.
- Systole. Contraction of the heart.
- TANNIC ACID. Astringent property of oak bark.
- Tartar Emetic. Tartarized antimony.
- Tenesmus. A griping in the lower portion of the bowels, and constant desire to go to stool.
- Turpentine. Concrete juice and oil from pine.
- Thorax. The chest.
- Thrush. White ulcers in the mouth.
- Tinnitus Aurium. Drumming in the ears.
- Tolu. Balsam extracted from a species of fir.
- Tormina. Griping pain in the bowels.

Trachea. Windpipe.
 Tracheitis. Inflammation of the mucous membrane of the trachea.
 Tubercles. Applied to scrofulous tumors.
 Tuberculous Phthisis. Scrofulous affection of the lungs.
 Tumid. Distended.
 Tympanitis. Abdominal distension.
 Tympanum. Drum of the ear.
 Typhoid Fever. Fever, in which the disease is principally located in the bowels.

ULCER. A morbid solution of the continuity of the part.
 Umbilicus. Navel.
 Urea. Cyanate of ammonia; a constituent of the urine.
 Urethra. Canal from the bladder, for the passage of the urine.
 Uriscopist. Quack doctor, who pretends to form diagnosis of disease from the urine.

VACCINATION. Insertion of cow-pox virus, as a protection against small-pox.

Valerian. Root used as a nervine.
 Variola. Small-pox.
 Varioloid. Modified small-pox.
 Vascular. Belonging to vessels.
 Venesection. Bleeding from a vein.
 Veratrum Viride. A valuable remedy for fevers.
 Veratrin. Concentrated principle of the veratrum.
 Vermifuge. Medicine given for worms.
 Vertigo. Dizziness.
 Vesicle. Bladder of water.
 Viburine. Concentrated remedy, prepared from the high cranberry.
 Vital. Connected with life.
 Vomica. An abscess in the lungs.

WHITE SWELLING. An inflammation of the periosteum and disease of the bone.

XANTHOXYLIN. Active principle of the xanthoxylum fraxineum, or prickly ash.

ZIMOTIC. Contagious.
 Zinc Sulphas. Styptic salt, and mild caustic.

APPENDIX TO GLOSSARY.

ACETABULUM. Cavity receiving the head of the thigh bone at the hip-joint.

Acromial. Belonging to the acromion.

Acromion. The top of the shoulder.

Adenitis. Inflammation of a gland.

Adynamic. Vital debility.

Allotropism. Changing of chemical quality under certain conditions.

Anæsthetic. Producing insensibility.

Animalcule. An animal only visible under the microscope.

Antrum highmorianum. Cavity above the molar teeth of the upper jaw.

Apex. The top or summit.

Ataxic. Irregular.

BUBONOCELE. Rupture in the groin.

CANALICULI. Small canals.

Carbon. Base of carbonic acid found pure in the diamond.

Cauterization. Application of a red hot iron.

Cervix. The neck.

Chloroform. An anæsthetic agent, a colourless liquid.

Collodion. A liquid prepared by dissolving gun cotton in strong sulphuric ether.

Condyle. A process, or knob.

Coracoid. A crow's beak, a bony process.

Coronal. Relating to the crown of the head.

Coronoid. The same as coracoid.

Corpuscle. An atom.

Crisis. Constitution, temperament.

Crepitus. Grating at the ends of fractured bones.

Crochet. An instrument used in extracting a dead foetus.

- DEFECATION. Act of extruding the fæces.
Disintegrated. Disorganized.
Duodenum. The intestine nearest the stomach.
Dynamic. Organic or vital force.
EFFLORESCENCE. Redness.
Embryo. The fœtus before the fifth month.
Emprosthotonous. The body bent forward by spasm.
Emulsion. Any milk-like mixture.
Epithelium. The fine cuticle on the lips and mucous membrane.
Eschar. A slough.
Eversion. Turned outward.
Exanthema. Eruption.
Excrementition. Ejecting the fæces.
FEMUR. Thigh bone.
Fibrine. A protean compound of animals and plants.
Fœtus. A young animal before birth.
Fontanelle. Apertures in the skulls of infants at the junction of the sutures.
Fungus. Proud flesh.
Fusiform. Spindle-shaped.
GANGLIA. Nervous knots.
Globulin. Albuminous constituent of the blood.
HEMATINE. Colouring principle of the blood.
Homologous. Parts of the same nature.
Hydatid. A cyst containing a transparent fluid developed in a cavity of the human body.
Hydrochloric acid. Muriatic acid.
Hyperemia. Injection of blood vessels.
ILIA. The flanks; the small intestines.
Incubation. Slow development of disease.
Inguinal. Belonging to the groin.
Ischium. The hip-bone.

KIDNEYS. Two bodies which secrete the urine.

LIGAMENT. An elastic tendinous cord.

Liquor amnii. Water surrounding the foetus in utero.

Lochia. Flow from the womb after child-birth.

MALPIGHIAN BODIES. Dark points in the kidneys.

Mammæ. The female breast.

Masseter. The muscle of the lower jaw.

Medulla oblongata. Portion of the spinal cord uniting it with the brain.

Micturation. Urination.

Molecules. The smallest atoms a substance can be conceived to be divided into.

NITROGEN. An element in the atmosphere.

OBSTETRICIAN. One who practises midwifery.

Occipital. Connected with the back part of the head.

Olecranon. End of the ulna at the elbow.

Opisthotonos. Bent backward in tetanus.

Orbital. Appertaining to the orbit.

Oseheocele. Hernia in the scrotum.

Osseous. Bony.

Os-uteri. Mouth of the womb.

PARIETES. Walls.

Parotid. Name of the salivary glands beneath each ear.

Paroxysm. Fit of disease recurring periodically.

Parturition. Child-birth.

Pellucid. Clear, transparent.

Pelvis. Cavity containing the lower part of the abdomen.

Perineum. Part between the anus and organs of generation.

Petechiæ. Purple spots in the skin in fever.

Phlegmon. Inflammation in the cellular tissue.

Phosphorus. Luminous and inflammable substance chemically prepared from urine and bones.

- Placenta. The after-birth.
- Plasma. The blood.
- Plethora. Excessive fulness of the blood vessels.
- Pleurosthotonous. Spasmodic bending of the body to one side.
- Plexus. Network of nerves or vessels.
- Popliteal. Nerves, vessels, and muscles in the ham.
- Prostate. A gland at the neck of the male bladder.
- Protein. Organic basis of fibrine, albumen, caseine, &c.
- Pubes. The external parts of the sexual organs that are covered with hair after puberty.
- Puerperal. Appertaining to child-birth.
- Puriform. Resembling pus.
- Pustule. An elevation of the cuticle covering pus.
- Pylorus. Lower and right orifice of the stomach.
- Pyriform. Pear-shaped.
- RECTUM. Lower portion of the intestines.
- Ruga. A wrinkle.
- SACRO-ILIAC. Muscle of the pelvis.
- Sacrum. Posterior bone of the pelvis.
- Scalpel. Surgeon's small knife.
- Scrotum. Bag inclosing the testicles.
- Sloughing. Discharging pus.
- Speculum. An instrument for inspecting certain openings in the body.
- Spherical. Round.
- Sphincters. Muscles surrounding certain openings of the body, closing them by contraction.
- Sporadic. Confined to some locality.
- Subsultus. Weak twitching.
- Sudamina. Miliary vesicles.
- Surgeon's Knot. Passing the thread twice through, a double knot.
- Symphysis pubis. Union of the hip bones in front.

Synochial. Relating to inflammatory fever.

Synovia. A fluid lubricating the joints.

TEMPORALIS. Relating to the temple.

Tenaculum. A hook used by surgeons in securing arteries.

Testes. Testicles.

Testicles. Belonging to the male organs of generation.

Tetanus. Locked jaw.

Thorax. The chest. The union of the pelvic bones in front of the body.

Thyroid. Resembling a shield.

Tibia. The large bone of the leg.

Tourniquet. An instrument to compress arteries and prevent hemorrhage.

Trephine. Instrument for perforating bones.

Trochanters. Tuberosities on the thigh bone.

Tuberosity. Projection.

UMBILICUS. The navel.

Ureter. Canal between the kidney and bladder.

Urethra. Canal from the bladder, through which the urine passes off.

Uterus. The womb.

Uvula. The pendulous body behind the soft-palate.

VAGINA. Passage to the uterus.

Varicose. Morbid dilatation of veins.

Vaseular. Belonging to the vessels.

Venery. Sexual indulgence.

Vertebræ. Bones of the spinal column.

Vertex. Crown of the head.

Vibices. Purple spots under the skin in malignant fevers.

Virus. Poison.

Vis-a-tergo. Force from behind; applied to the impulse given to the current of blood in the arteries by the heart's systole.

Viscera. Internal organs of the body.

Vulva. The female pudendum.

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ERRATA.

Page 452, last line, read five or ten drop doses, instead of five or ten drachm doses.

Page 601, read dilute remedy, for trit. remedy.

DIARRHŒA.

Diarrhœa is a disease of frequent occurrence, both in children and adults. It is connected with many forms of fever, as has already been noticed under head of fevers. But it often occurs in warm weather, as the result of a vitiated state of the stomach and bowels; more frequently in children than adults. When diarrhœa occurs in children, the cause should be ascertained, and removed. After which, give neutralizing mixture until it acts upon the bowels. If this does not control the disease, give the following:—Take phosphate of lime, twenty grains; gelsemin, one grain; bi-carbonate of soda, one-half drachm; leptandrin, ten grains; and pulverized camphor, five grains. Mix and triturate. While triturating, add five drops of oil of peppermint. Divide into thirty powders, and give one every two or three hours as indicated. If this does not effect a cure, Recipe No. 1, for Dysentery, may be used as directed. If still the disease is not checked, the patient should be placed in a recumbent position in bed and a few doses of camphor and hyoseyamin should be given, say five grains of hyoseyamin, two of camphor, and thirty of gum Arabic; triturated, and divided into fifteen powders. Dose, one every two hours. In chronic diarrhœa, of old people, the treatment should be according to indications. It should consist mostly of a well regulated diet, tonics, antiseptics and antiperiodics.

The following compound has cured several cases when other means failed:—Take quinine, twenty grains; hydrastin, thirty grains; white pine gum, forty grains; morphine, four grains. Mix, and make twenty pills. Dose, one three times a day. Also apply a salt pack to the bowels for two or three hours every day; followed by friction and stimulating liniment. The patient should be allowed to drink freely of coffee made of scorched rice.

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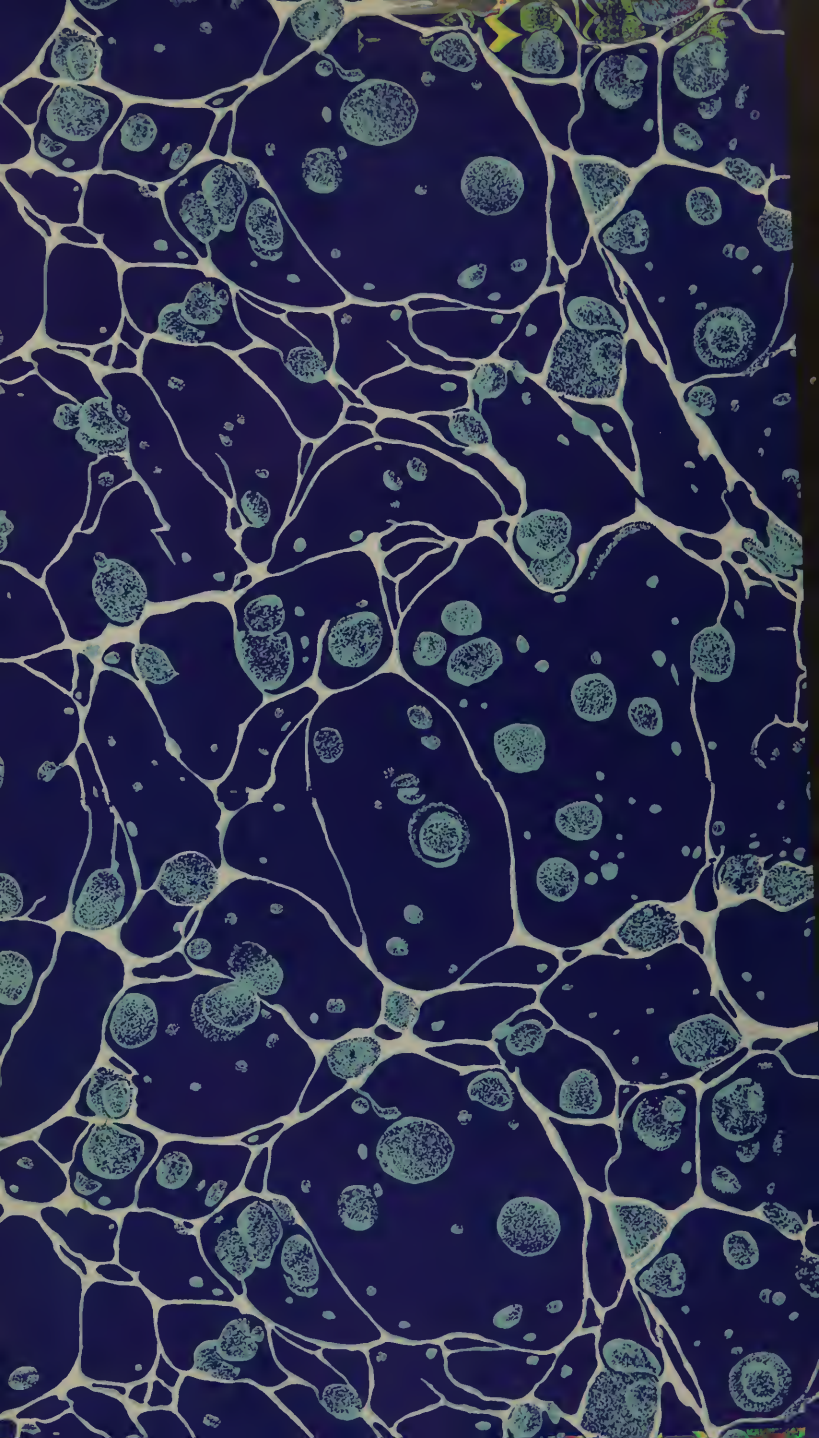
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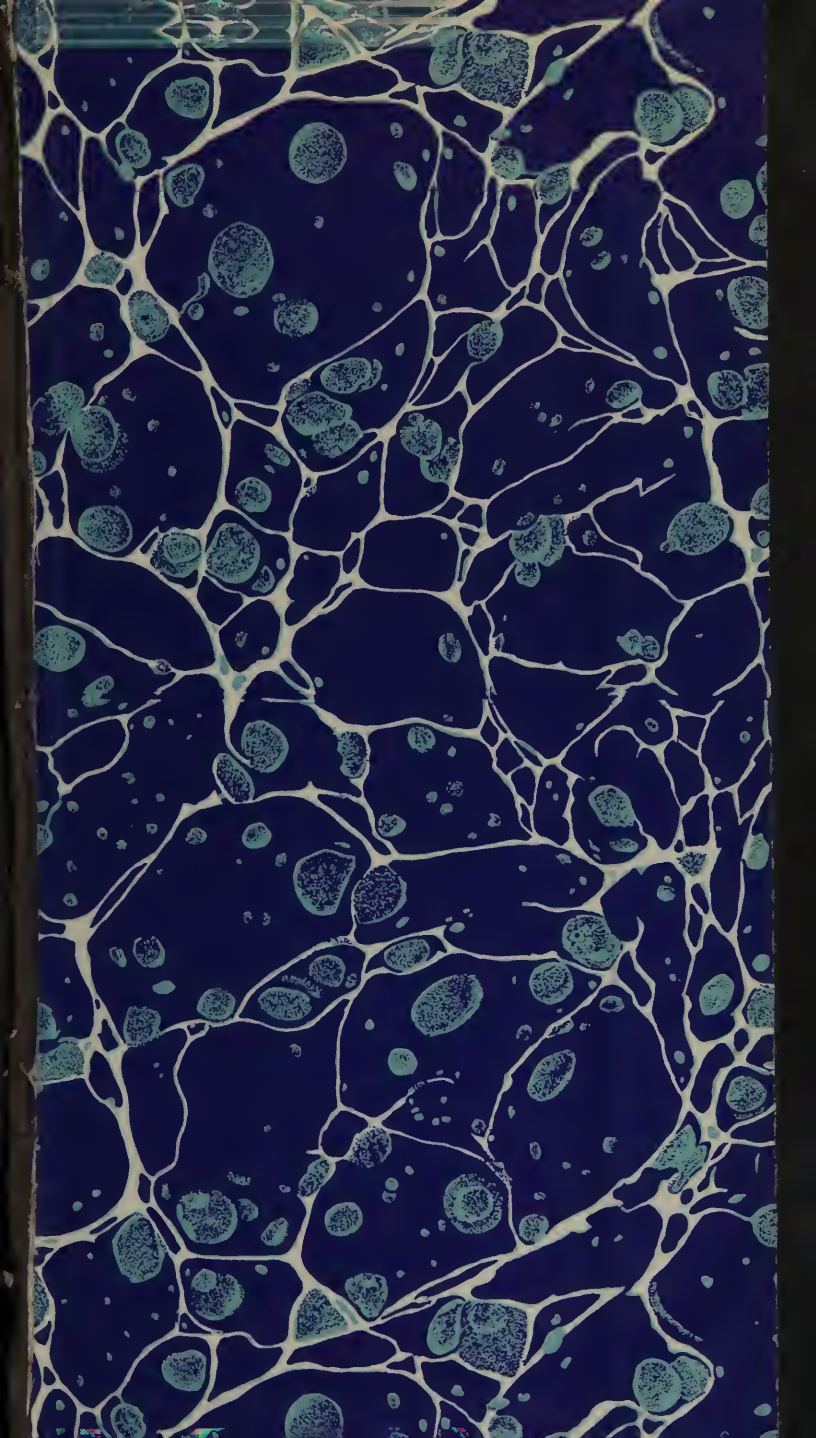
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